

# **EXHIBIT 2**

UNITED STATES DISTRICT COURT  
DISTRICT OF NEW JERSEY

KIMBERLY COLE, ALAN COLE, )  
JAMES MONICA, LINDA BOYD, )  
MICHAEL MCMAHON, RAY SMINKEY, )  
JAMES MEDDERS, JUDY MEDDERS, )  
ROBERT PEPERNO, SARAH PEPERNO, )  
and KELLY MCCOY, on behalf of )  
themselves and all other )  
similarly situated, )

Plaintiffs, )

vs. )

CIVIL ACTION NO.

13-7871(FLW)(TJB)

NIBCO, INC., )

Defendant. )

— — — — — )

The deposition of EARL HOWARD SEXTON, III

Date: Tuesday, October 11, 2016

Time: 8:54 a.m.

Place: Hilton Garden Inn

3401 Plaza Court

Elkhart, Indiana

Called as a witness by the Plaintiffs  
in accordance with the Federal Rules of  
Civil Procedure for the District  
of New Jersey, pursuant to Notice

Before Michelle Soffa, Court Reporter  
Notary Public, Porter County, Indiana

MIDWEST REPORTING  
1448 Lincolnway East  
South Bend, Indiana 46613

1 APPEARANCES:  
2

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16 and

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22 on behalf of the Defendant;

23  
24 ALSO PRESENT: MS. JENNIFER E. KELLY  
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1 EARL HOWARD SEXTON, III,  
2 called as a witness by the Plaintiffs,  
3 having been first duly sworn, was examined  
4 and testified as follows:

5 DIRECT EXAMINATION

6 BY MR. SHAMBERG:

7 Q Good morning, Mr. Sexton. My name's Kyle Shamberg  
8 and I represent the plaintiffs in the class in this  
9 case. I'm gonna be asking you some questions this  
10 morning. Before we do that I just want to make a  
11 statement on the record.

12 MR. SHAMBERG: Jennifer Kelly from  
13 Cuneo Gilbert and LaDuca is in attendance  
14 this morning. She does not represent any  
15 of the parties in the case. And we have  
16 agreed with defense counsel that she's  
17 able to attend and observe today's  
18 deposition without prejudicing her rights  
19 to depose Mr. Sexton as well as Misterys  
20 Clark and McCoy in her own case.

21 Is that fair, Kevin?

22 MR. KUHLMAN: Yes.

23 BY MR. SHAMBERG:

24 Q So Mr. Sexton, could you please state your full  
25 name and your date of birth?

1 A Earl Howard Sexton, III, December 29th, 1950.

2 Q Have you ever been deposed before?

3 A Yes.

4 Q How many times?

5 A Maybe half a dozen.

6 Q Okay. Have any of those other depositions related  
7 to your employment at NIBCO?

8 A Yes.

9 Q Have any of those other depositions related to  
10 PEX-C tubing?

11 A Yes.

12 Q How many of the depositions related to PEX-C  
13 tubing?

14 A I believe three others.

15 Q Okay. Do you recall the first?

16 A That would be a case in Oklahoma, Abbot.

17 Q That dealt with an alleged issue of field failure  
18 with PEX-C tubing?

19 A Yes, sir.

20 Q What about the second case?

21 A Second would be Pulte Homes in San Antonio, Texas.

22 Q And same, dealt with field failures of PEX-C  
23 tubing?

24 A Yes, sir.

25 Q Do you recall about how many field failures were

1 involved in that case?

2 A No, sir, I do not.

3 Q No estimate?

4 A No estimate.

5 Q And the third case?

6 A The third case would be Christianson and that was  
7 also in San Antonio.

8 Q And, again, involved field failures of PEX-C  
9 tubing?

10 A Yes, sir.

11 Q Do you recall about how many failures were involved  
12 in that case?

13 A No, I don't.

14 Q Was it multiple?

15 A Multiple.

16 Q Dozens?

17 A As I said, I don't have a firm grasp of how many  
18 were involved.

19 Q But more than one?

20 A Yes.

21 Q All right. So -- oh, have you ever given testimony  
22 at a trial before?

23 A No, sir.

24 Q So I'm gonna go over some ground rules, I'm sure  
25 you have heard these before. When you respond to

1 my questions I'd ask that you do so verbally with a  
2 yes or no so the court reporter can take it down  
3 and it's clear to anyone looking at the transcript.

4 You can take a break at any time but I just  
5 ask you not do so while the question is pending.  
6 And if I ask a question and you answer, I'll assume  
7 you understood it. So if you don't understand  
8 anything I ask you or you want clarification, just  
9 let me know and I'm happy to do that for you. Is  
10 that fair?

11 A Yes, sir.

12 Q What's the highest education level you've achieved?

13 A I have a bachelor of science degree in chemistry.

14 Q Chemistry. When did you receive that degree?

15 A 1974.

16 Q Okay. And after you finished school in 1974, did  
17 you start work?

18 A Yes, sir.

19 Q Where were you working at that time?

20 A I was employed at Crane Plastic in Columbus, Ohio.

21 Q How long were you with Crane?

22 A Twenty-six years.

23 Q And what were your -- when you started at Crane,  
24 what were your job duties?

25 A I joined Crane as a lab technician.

1 Q Okay. And what did your duties involve as a lab  
2 technician?

3 A It was -- Crane was manufacturing its own compounds  
4 as well as making product for the building trades  
5 industry. And I was involved in testing the  
6 materials and sometimes the products that they  
7 produced.

8 Q Okay. Did those job duties change at all during  
9 your time at Crane?

10 A Yes, sir.

11 Q Okay. When did they change?

12 A I don't have a firm grasp of the dates, okay. But  
13 it was a gradual transition with more  
14 responsibility to eventually I ended up as a  
15 project manager there when I left Crane.

16 Q Okay. As a project manager, did your job involve  
17 the same kinds of products that you previously  
18 described as a lab technician?

19 A Yes, sir.

20 Q Did any of the product that you worked with at  
21 Crane involve the use in plumbing applications?

22 A No, sir.

23 Q When did you start working at NIBCO?

24 A In 2002.

25 Q So that was immediately after you left Crane?

1 A Yes, sir.

2 Q And what was your job title when you started at  
3 NIBCO?

4 A I was materials engineer in plastics.

5 Q In plastics?

6 A Yes, sir.

7 Q So similar to what you were doing at Crane?

8 A Yes, sir.

9 Q Were the plastics that you were working with at  
10 NIBCO intended for plumbing applications?

11 A Yes, sir.

12 Q Okay. How long did you work in plastics at --  
13 well, how long did you work in that particular role  
14 at NIBCO?

15 A Until 2009.

16 Q Two thousand nine. Okay. How did your role change  
17 in 2009?

18 A In 2009 I became the product engineer for PEX.

19 Q Is that all PEX products?

20 A I'm not sure I understand the question.

21 Q Okay. Does that involve -- does that cover PEX  
22 tubing?

23 A Yes, sir.

24 Q What about PEX fittings?

25 A Yes, sir.

1 Q And PEX clamps?

2 A Yes, sir.

3 Q Are there any other products that are within your  
4 purview as project manager?

5 A The only additional one would be manifolds.

6 Q What are manifolds?

7 A Manifolds are basically a distribution center -- or  
8 system, okay, the feed would come in one end then  
9 the manifold allows you to distribute, okay, that  
10 feed, okay, to different rooms in the house.

11 Q Prior to the beginning of your employment at NIBCO,  
12 did you have a background in failure analysis?

13 A No, sir.

14 Q We have kind of already discussed this but does  
15 NIBCO manufacture PEX-C tubing?

16 A Yes, sir.

17 Q When did it begin manufacturing PEX-C tubing?

18 A 2006.

19 Q Is that around the time when it purchased the  
20 assets of CPI?

21 A Yes.

22 Q Was NIBCO selling PEX tubing prior to the date it  
23 began manufacturing PEX tubing?

24 A Yes, sir.

25 Q When did NIBCO begin selling PEX tubing?

1 A That I don't know.

2 Q Was NIBCO selling PEX tubing when you began in  
3 2002?

4 A That I don't know.

5 Q So after you began at NIBCO you don't recall -- do  
6 you recall a date or approximate time at which  
7 there were discussions about beginning to sell PEX  
8 tubing?

9 MR. KUHLMAN: Object to form.

10 A No, sir.

11 BY MR. SHAMBERG:

12 Q When NIBCO began selling PEX tubing, where was that  
13 tubing sourced from?

14 A It was sourced out of a facility in Lebanon, Ohio.

15 Q Was that a CPI facility?

16 A It was a -- yes, it was.

17 Q Are you aware of any other entities other than CPI  
18 from which NIBCO sourced PEX tubing?

19 A Yes, sir.

20 Q Okay. Let me just to clarify this, when I say "PEX  
21 tubing," I've also said PEX-C. Can we have the  
22 understanding that if I say PEX tubing, I'm  
23 referring to the PEX-C tubing and if I want to  
24 reference PEX-A or PEX-B, I'll indicate that. Is  
25 that fair?

1 A That's fair.

2 Q What qualifies you to make conclusions about the  
3 root causes of field failures in PEX tubing?

4 A My past -- past experience, okay, and both at  
5 Crane, okay, 'cause I stated that I had examined  
6 and tested products that was produced by Crane,  
7 okay, that were used in building product  
8 applications, okay, residential applications.  
9 Included as -- in that was, okay, evaluation  
10 samples that were purposely exposed to -- to define  
11 their performance, long-term performance out in the  
12 field then also the examination of select samples  
13 that have come into NIBCO at the -- been in the  
14 field and gone through field failures.

15 Q Okay. So at Crane, the products you were testing,  
16 those weren't field failure returned products, were  
17 they?

18 A There were a few, not a large number.

19 Q Okay.

20 A But most of these would be samples that we had  
21 prepared and purposely submitted to exposure sites  
22 or Beta sites or what have you and then brought  
23 back in for testing.

24 Q That would be prior to putting those products in  
25 the market? In other words, you're trying to

1           determine what the expected performance of the  
2           product would be in the field?

3       A    Determine and also we use that data to improve the  
4           performance of our existing products.

5       Q    How is the testing of existing or soon to be  
6           marketed products different from analyzing field  
7           failed returned products?

8                               MR. KUHLMAN: Object to form.

9       A    Probably the largest difference would be the  
10          cleanliness of the samples coming from the  
11          laboratory. Okay, we're -- when we send out  
12          samples purposely, okay, they are exposed and under  
13          very defined conditions, okay, depending on what we  
14          were looking for. And they are returned to us  
15          basically just looking at those conditions that  
16          they were exposed to, okay.

17                 Field failures you can get samples that have  
18          been buried, they have been under concrete, they  
19          have been exposed in the sunlight, they have been  
20          up in the attic. So you get a variety of  
21          conditions, okay, that you don't really plan for,  
22          okay, and so that makes probably the biggest  
23          difference.

24       Q    So the conditions in the field are different from  
25           the conditions you would see in a lab?

1 A Yes, sir.

2 Q Okay. Did you meet with anybody or speak with  
3 anybody to prepare for the deposition today?

4 A I had a meeting with counsel yesterday.

5 Q Okay. And I don't want you to, obviously, tell me  
6 about anything you discussed but about how long did  
7 you meet with counsel?

8 A About 45 minutes or so.

9 Q Okay. Was there anyone else you spoke with to  
10 prepare for today?

11 A No, sir.

12 Q Did you review any documents?

13 A I reviewed maybe half a dozen documents that  
14 counsel forwarded to me yesterday.

15 Q Okay. Did you bring those documents with you?

16 A No, sir.

17 MR. SHAMBERG: Have those  
18 documents -- Kevin, have those documents  
19 been produced to us, do you know?

20 MR. KUHLMAN: I don't know. I  
21 wasn't involved in that.

22 MR. SHAMBERG: I would ask that  
23 you -- if you could look into it and if  
24 those documents aren't protected by any  
25 confidentiality provision I'd ask that

1                   they be produced if they haven't been.

2       BY MR. SHAMBERG:

3       Q     So I want to get back to the analysis of field  
4             return tubing. If you're looking at field return  
5             PEX tubing that comes into you for analysis, what  
6             are you gonna be looking for to determine the root  
7             cause of the failure?

8       A     The typical evaluation would be we will do a  
9             visual examination, okay, looking at the -- as I  
10            stated the exterior condition of the tubing, okay,  
11            if there is any evidence of abuse or obvious  
12            defects in the outer wall of the tubing, if it is  
13            visible to us, okay. We will do the same on the  
14            interior wall in the area of this split or crack or  
15            whatever the defect or this failure is. At that  
16            point, okay, we will go in and also take dimensions  
17            on that tubing, okay, to compare it back to the  
18            dimensions of the specifications then also the  
19            dimensions at the time that the tubing was  
20            produced. We will progress to doing the  
21            microscopic examination of the failure site, okay.  
22            Once again, this involves the outer wall, things  
23            that we can readily see using a microscope, okay.  
24            At that point we make a decision, okay, have we  
25            found enough or have we found any indication of the

1 cause of the defect, okay.

2 If not then we will go back to the customer  
3 that's submitted the sample and ask for permission  
4 to destroy and we may take samples and begin to  
5 section them to allow a closer examination of the  
6 inner wall, okay, once again, looking for causes  
7 and defects and what have you associated with the  
8 failure. And then that may progress to actually  
9 sectioning the part and begin to look at the  
10 fracture surface.

11 Q Okay. How would you go about determining  
12 whether -- for PEX tubing whether installation  
13 error was the root cause of the failure?

14 A You look for obvious defects in the area of the  
15 failure, okay, is the tubing -- has the tubing  
16 shown evidence of deformation, okay, in the wall,  
17 okay. If you see a crease running across, okay,  
18 that suggests the tubing has been severely bent,  
19 okay. But the same thing, okay, if you see a  
20 slight deformation, okay, that suggests that  
21 perhaps it's been bent around a stud or something  
22 like that. So looking for deformations in both the  
23 inner and outer wall is something that you look for  
24 in terms of installation.

25 Q Are there other potential causes of those

1 deformations that you're speaking of other than  
2 installation error?

3 A That's -- installation -- well, depends how you  
4 define installation, okay, meaning it's during  
5 handling, okay. It could have been before the  
6 tubing was installed, okay. It could have been  
7 rough handling by the plumber, okay, perhaps he --  
8 pulling off his truck. It could be deformed during  
9 shipment. It could be deformed, okay, in the  
10 contractor's storage room, okay. So, yeah, there  
11 is other potential sources for that deformation.

12 Q And this particular deformation that you're talking  
13 about would that necessarily be caused by rough  
14 handling or bending of the tubing?

15 MR. KUHLMAN: Object to form.

16 A Yes, sir.

17 BY MR. SHAMBERG:

18 Q So if you see one of these deformations you would  
19 know that the cause was the physical handling of  
20 the tubing?

21 A Yes, sir.

22 Q How would you be able to tell if over pressure --  
23 over-pressurization contributed to a failure in the  
24 field?

25 A That is -- pressure is one of the attributes, okay.

1 PEX tubing, if you're sewing into a potable water  
2 application it has to meet a criteria for chlorine  
3 resistance. And pressure is one of the factors  
4 that people control, test laboratories control to  
5 accelerate that failure. And so there is a direct  
6 link between pressure and the time to failure due  
7 to chlorine or oxidative attack. And it's very  
8 easy to define pressure because PEX tubing is  
9 flexible. As you begin to increase the pressure  
10 either very rapidly or even slight increases over a  
11 period of time, you will see an increase in OD.

12 Q Okay. So I think my question was a little bit  
13 different. I want to hone in on that. I  
14 understand the relationship between the standards  
15 for chlorine resistance and how pressurization can  
16 tie into that. What I'm wondering is when you get  
17 a field returned PEX tubing sample to analyze, how  
18 do you make the determination that  
19 over-pressurization was the cause of the failure?

20 A Okay, we will start, once again, with the  
21 dimensions that we take, okay. If we see dramatic  
22 shift in the OD, okay, increase in the OD, that's  
23 an indication to us that perhaps  
24 over-pressurization is a factor, okay. At that  
25 point, okay, we will forward that information onto

1           our tech services group and depending on the  
2           severity of the claim they will make a  
3           determination whether we should send  
4           representatives out to a site and we will actually  
5           do monitoring of the pressure at the residence.

6       Q    Okay. When you say increase in OD, OD, that's  
7           outer diameter of the tubing; is that correct?

8       A    Yes, sir.

9       Q    Can there be any other cause of an increase in a  
10          tubing's outer diameter other than  
11          over-pressurization?

12      A    I'm not aware of any.

13      Q    Would tubing that was returned from the field be  
14          O -- have an outer diameter -- strike that.

15               Do you do on-site inspections of tubing in the  
16          field?

17      A    I have done very few, okay. We have other people,  
18          okay, that we will typically send to do on-site  
19          inspections of PEX.

20      Q    Okay. You have done very few. Do you know about  
21          how many you have done?

22      A    The years I've been there probably less than five.

23      Q    Can you estimate when a PER comes in and the  
24          determination is that over-pressurization  
25          contributed to the failure, do you know what

1 percentage of the time NIBCO will send someone out  
2 into the field for further observation?

3 A Can you help me? I'm not familiar with PVR.

4 Q PER.

5 A PER. I'm sorry, I misunderstood. No, I'm not -- I  
6 don't know, okay, all the factors that they look at  
7 in deciding whether to send people out there or how  
8 often that happens.

9 Q Would you agree that the best way to determine  
10 whether or not PEX tubing is installed properly is  
11 to go look at the tubing as it's installed?

12 A Yes, sir.

13 Q Let's say in 2006 when field returns came into  
14 NIBCO where did they go for PEX tubing?

15 A At that time they went to the facility in Lebanon.

16 Q In Lebanon. That's where the PEX tubing was being  
17 manufactured?

18 A Yes.

19 Q After the acquisition of CPI?

20 A Yes, sir.

21 Q Had that been the case prior to 2006 as well where  
22 field returns were going to the Lebanon facility?

23 A That I don't know.

24 Q Was there a point in time when PEX tubing field  
25 returns stopped going to Lebanon?

1       A     Yes, sir.

2       Q     When was that?

3       A     I don't know the exact date.

4       Q     Okay. About 2012 sound in the ballpark?

5       A     I would've guessed around that range, 2012, 2013.

6       Q     Okay. And where did the field returns start going

7             at that time?

8       A     They started going -- they started going to world

9             headquarters here in Elkhart.

10      Q     Who would those field returns have been sent to in

11             Elkhart?

12      A     Those -- we have a laboratory, okay, that is set up

13             to evaluate field returns, okay, that laboratory

14             goes through Scott Perry.

15      Q     Okay. That's the Dare Lab?

16      A     Yes.

17      Q     How long has Scott Perry run the Dare Lab?

18      A     That I don't know.

19      Q     Before 2012?

20      A     As I said that I don't know.

21      Q     Why did NIBCO start sending the field return PEX

22             tubing to the Dare Lab rather than Lebanon in

23             around 2012?

24      A     It was a drive to try and make our evaluation more

25             consistent. The problem being, okay, if you send

1           them into a plant, okay, the plant has a number of  
2           technicians, some that may or may not have  
3           experience in looking at field returns, okay,  
4           knowing what to look for, okay. And this was a  
5           drive to try and bring it in, okay, to one group of  
6           people that are trained in looking at or examining  
7           products, looking for potential causes of failure  
8           and making the determination on those products.

9       Q    So you said that the people at the manufacturing  
10           facility might not have a background in failure  
11           analysis?

12                               MR. KUHLMAN: Object to form.

13       A    Yes, sir.

14       BY MR. SHAMBERG:

15       Q    Why was NIBCO having them analyze the field returns  
16           up through 2012 if they lacked the appropriate  
17           background?

18       A    That was just a continuation of the process that we  
19           inherited from CPI. But it was also, okay, just  
20           the way NIBCO chose to do that evaluation at that  
21           time.

22       Q    Okay. Continuing the process from CPI, that was  
23           sort of a common trend, right, in terms of the  
24           PEX-C tubing manufacturing process and review  
25           process?

1 MR. KUHLMAN: Object to form.

2 A I'm not sure I understand that question.

3 BY MR. SHAMBERG:

4 Q When NIBCO purchased CPI in 2006, did NIBCO make  
5 any changes to the manufacturing process of the PEX  
6 tubing?

7 A No, sir.

8 Q Still used the same extrusion process as CPI?

9 A Yes.

10 Q The same colorants?

11 A Yes, sir.

12 Q Same resin?

13 A Yes, sir.

14 Q Same cross-linking process?

15 A Yes.

16 Q And up until the PEX tubing was reformulated -- and  
17 we'll talk about that -- but up until that point  
18 there were no changes in the process for  
19 manufacturing PEX tubing from how that process  
20 functioned at CPI?

21 MR. KUHLMAN: Object to form.

22 A Not being involved every -- on a daily basis at the  
23 plant, okay, I can't make any comments regarding no  
24 changes.

25 BY MR. SHAMBERG:

1 Q To your knowledge there were no changes?

2 A To my knowledge there weren't.

3 Q Who's the most knowledgeable person at NIBCO  
4 regarding failure analysis of field return PEX  
5 tubing?

6 MR. KUHLMAN: Object to form.

7 A I would say either myself or Scott Perry.

8 BY MR. SHAMBERG:

9 Q Okay. And neither you nor Scott Perry were doing  
10 the failure analysis for PEX tubing until 2012?

11 A I would occasionally be asked to look at samples  
12 that came in prior to 2012, okay, but it was not a  
13 routine -- on a routine basis.

14 Q Do you recall about how many times you would have  
15 done that prior to 2012?

16 A Maybe half a dozen times a year.

17 Q Okay. Prior to 2012 you were the product engineer  
18 for PEX tubing?

19 A Starting at about 2009.

20 Q Okay. So let's say from when you started at NIBCO  
21 in 2002 up until 2012, what percentage of your time  
22 was dedicated to failure analysis of field returned  
23 PEX tubing?

24 A Could you repeat that question, please?

25 Q Yeah, from 2002 until 2012, what percentage of your

1 time was spent performing failure analyses for  
2 field returned PEX tubing?

3 A I'd say very minor, less than 10 percent.

4 Q Okay. And how about from 2012 until now, about  
5 what percentage of your time was spent doing those  
6 failure analyses for PEX tubing?

7 A Still fairly minor, increased to maybe 15 to  
8 20 percent.

9 Q And has the time you spent conducting those failure  
10 analyses for field-returned PEX tubing increased in  
11 the last two years from where it would have been in  
12 2013 or 2014?

13 A No, sir.

14 Q Okay. Why did the percentage of the time increase  
15 after 2012?

16 A It was -- we were transitioning, brought the  
17 testing, the field returns from the plants to Dare  
18 Lab, okay. There is obviously a training or  
19 learning curve that technicians have to go through,  
20 okay. They have to become more familiar, okay, not  
21 only with the testing of the PEX tubing but also  
22 things to look for, okay. So a lot of times I was  
23 brought in on a lot of the field returns to look at  
24 them but also to help train the people, educate the  
25 lab technicians what to look for, okay. As they

1           have gotten better, okay, my involvement is tapered  
2           off some.

3       Q    Okay. So are there other individuals at NIBCO now  
4           who are conducting these failure analyses for  
5           field-returned PEX tubing?

6       A    Yes, sir.

7       Q    Who are those people?

8       A    Those would be the lab technicians that are in the  
9           Dare Lab.

10      Q    Do you know the names of any of those technicians?

11      A    I don't know all of them, okay, two current ones  
12           would be Tim O'Brien and I can't remember the  
13           gentleman -- the second gentleman's name.

14      Q    And will these lab technicians at the Dare Lab  
15           report their findings to you?

16      A    No. Those will go onto Scott Perry and Ken McCoy.

17      Q    And if you personally conduct a failure analysis,  
18           will you also report those -- your findings to Ken  
19           and to Scott?

20      A    Yes, sir.

21      Q    Do you have a counterpart -- so -- strike that.  
22           You're a product engineer for PEX tubing. Right?

23      A    Yes, sir.

24      Q    Is there a counterpart at NIBCO for PEX fittings?

25      A    PEX fittings also fall under my responsibilities

1           these days.

2       Q     So the counterpart is you?

3       A     Yes.

4       Q     What about for PEX clamps?

5       A     Same.

6       Q     I just want to ask you a quick question about a  
7           document here.

8                               MR. SHAMBERG:   I'm gonna mark this  
9                               as Plaintiff's Exhibit 17.

10           (Exhibit 17 was marked for identification.)

11   BY MR. SHAMBERG:

12       Q     So I have a couple questions but please take your  
13           time and review the document and then let me know  
14           when you're ready.

15       A     Okay.

16       Q     Okay.  Sir, this is an email chain and I just have  
17           a couple specific questions about this so if you  
18           can look at this first page, this is marked  
19           NIBCO-Cole 33648.  The bottom here there's an  
20           email that you wrote to Steve Noto and a couple  
21           other people on July 23rd, 2008.  Do you see that  
22           email?

23       A     Yes, sir.

24       Q     And you say in here, "Materials used in PEX fitting  
25           applications are receiving a lot of attention due

1 to dezincification issues experienced by Zurn with  
2 their brass fittings."

3 What were those dezincification issues that  
4 Zurn WAS experiencing?

5 A Zurn -- and I don't -- I don't know the exact dates  
6 but Zurn went through a class action lawsuit, okay,  
7 a number of dezincification complaints with their  
8 fittings installed in Las Vegas, Nevada.

9 Q Okay. Do you have any knowledge about what the  
10 failure mechanism was in that case?

11 A No, sir, I do not.

12 Q If you turn to the very next page here in the  
13 document it's a continuation of that same email and  
14 there is section "Conclusions." And in that  
15 section you say that, "TEA coated brass shows no  
16 evidence of corrosion or scale build-up. However,  
17 the TEA coated samples have areas of inadequate TEA  
18 coating and these areas perform similarly to  
19 uncoated brass."

20 What's TEA?

21 A TEA is -- it's an acronym and I don't recall what  
22 that acronym exactly stands for. But it was a  
23 metallic coating or plating, if you will, that we  
24 were looking at putting on the brass fittings,  
25 okay, to -- and it was a coating designed to be

1 less resistant to corrosion attack.

2 Q Okay. And your conclusion there then is that --  
3 well, let's go up to a following email there on the  
4 first page of this document here. It's the email  
5 all the way at the top that you wrote on August 4,  
6 2008. And the last sentence in this email you  
7 conclude, "In my opinion, the poor performance of  
8 the 26 wk 900 sec sample is due to inadequate TEA  
9 coating after initial treatment."

10 Is that 26 week? Twenty-six wk does that  
11 indicate 26 week?

12 A Yes, sir.

13 Q 900 sec, 900 seconds, is that right?

14 A Yes, sir.

15 Q So your conclusion here is that the trouble with  
16 these fittings was inadequate TEA coating; is that  
17 correct?

18 A Yes, sir.

19 Q Okay. And what happens if a fitting is  
20 inadequately fitted with this TEA?

21 MR. KUHLMAN: Object to form.

22 A If you're putting TEA -- or the coating on the  
23 fitting to prevent corrosion and it's -- the  
24 coating's not uniform or doesn't completely cover,  
25 then it's not able to do its job. Okay, whatever

1 is attacking the underlying brass, okay, now has an  
2 avenue to attack even though you have coated it.

3 BY MR. SHAMBERG:

4 Q Okay. Does NIBCO currently manufacture fittings?

5 MR. KUHLMAN: Object to form.

6 A Yes, sir.

7 BY MR. SHAMBERG:

8 Q Okay. What -- what kind of fittings does NIBCO  
9 currently manufacture?

10 A Could you clarify that question, please?

11 Q What materials comprise the fittings that NIBCO  
12 currently manufactures?

13 MR. KUHLMAN: Object to form.

14 A There is a wide variety of materials.

15 BY MR. SHAMBERG:

16 Q Let's start here. Are they plastic fittings?

17 A They can be, yes, sir.

18 Q So they are plastic fittings? NIBCO currently  
19 manufactures plastic fittings?

20 A We manufacture both. We manufacture metal and  
21 plastic fittings.

22 Q Okay. What metal does NIBCO currently use in the  
23 fittings it manufactures?

24 A Largest would be copper.

25 Q What -- are there -- are there others?

1 A I believe they manufacture some fittings out of  
2 brass.

3 Q Does NIBCO currently source fittings from other  
4 manufacturers?

5 A Yes, sir.

6 Q Who are those manufacturers?

7 A I don't know all the manufactures.

8 Q Can you name the ones you do know?

9 A The two that I'm most familiar would be IDC and  
10 Longda.

11 Q And has NIBCO -- since 2002 since you began there  
12 have there been other times when NIBCO has sourced  
13 fittings from other manufacturers?

14 A That I wouldn't have any information on.

15 Q So you know the NIBCO currently sources fittings  
16 from other manufacturers?

17 A Yes, sir.

18 Q But you don't know whether -- you don't know when  
19 NIBCO began doing that?

20 A That's correct.

21 Q Do you know whether NIBCO was sourcing fittings  
22 from other manufacturers in 2013?

23 A Yes, sir.

24 Q Were they?

25 A Yes.

1 Q Or was it? What does NIBCO do to monitor the  
2 quality of the fittings it sources from other  
3 manufacturers?

4 A We started doing a metal analysis on the incoming  
5 fittings to confirm that the alloy that the  
6 fittings were made of conformed with the  
7 requirements in our specifications.

8 Q When did NIBCO begin doing that metal analysis?

9 A That I don't have the exact date, that I don't  
10 know.

11 Q Can you approximate it, a year?

12 A No, sir, I can't.

13 Q Within the last five years?

14 A Yes, that would be fair.

15 (Exhibit 18 was marked for identification.)

16 BY MR. SHAMBERG:

17 Q This is Plaintiff's Exhibit 18. Again, please take  
18 a look at that then I'll ask you a few questions  
19 about it.

20 A Okay, sir.

21 Q So okay is -- this is another email chain and  
22 this -- this email chain indicates that you were  
23 performing an analysis of certain fittings that had  
24 been sourced from other manufacturers; is that  
25 correct?

1 A Supplied by other manufacturers.

2 Q Yes, that's correct. That's supplied by other  
3 manufacturers?

4 MR. KUHLMAN: Object to form.

5 A I differentiate source versus supply.

6 BY MR. SHAMBERG:

7 Q Okay. Can you explain the distinction between --

8 A Sourcing means we are actually purchasing. Supply  
9 means we may have gone out and asked for samples as  
10 part of a request for a quote.

11 Q Okay. So you're performing an analysis on fittings  
12 that were provided to NIBCO by other manufacturers?

13 A Yes, sir.

14 Q Okay. And can you just -- in this email on the  
15 second page of this document from 3:09 p.m. on  
16 March 13th, can you -- there is data in here. Can  
17 you describe to me the analysis you were performing  
18 on these fittings?

19 A It looked like we were looking not only at the  
20 metal analysis, okay, using x-ray fluorescent, that  
21 would be the XRF on the following page. We were  
22 looking at the markings on the fittings, okay, to  
23 make sure they conformed with our requirements. We  
24 used the metal analysis to confirm the alloy that  
25 the fittings were made out of, that would be the

1           464, 465. And then looks like we did  
2           dezincification testing for the NSF 14  
3           requirements. We also did stress corrosion, which  
4           is also NSF 14 requirements.

5       Q    Okay. Did you perform dimensional checks of the  
6           fittings?

7       A    I thought I saw a comment in here we had not at  
8           that time, okay, that was one of the areas that  
9           needed to be done.

10      Q    Were the dimensional checks done?

11      A    There is no data to that. I don't recall this  
12           evaluation so I don't know if it was done or not.

13      Q    You don't have a specific memory of conducting the  
14           dimensional checks?

15      A    No, sir, I do not.

16      Q    That's not withstanding -- first of all, who is  
17           Randy Doering?

18      A    Randy Doering was general manager at PEX.

19      Q    Okay. So he was kind of in charge of the whole  
20           product line; is that fair?

21      A    Yes, sir.

22      Q    Okay. And in his email on March 13th, he's asking  
23           why there were no dimensional test results and  
24           suggesting that this should have been done first.  
25           Correct?

1 MR. KUHLMAN: Object to form.

2 A That would be the question he's asking, yes, sir.

3 BY MR. SHAMBERG:

4 Q But you're not aware today whether those  
5 dimensional checks were ever performed?

6 A No, sir, I'm not.

7 Q Okay. Then if we turn to the first page, follow-up  
8 email from you the next day, March 14th at  
9 8:58 a.m. And you say that the data suggests a  
10 couple of things to you. And if you go down to the  
11 second kind of hash there you say, secondly, the  
12 data, it gives some indication of the degree of  
13 risk for us and the industry if others sell these  
14 fittings. Data suggests we could see significant  
15 field issues with these fittings. It's difficult  
16 to quantify this risk.

17 What would those significant field issues be  
18 in this context?

19 A Well, looking at the data we were seeing  
20 dezincification with these samples. Okay,  
21 dezincification, okay, once again, was exactly the  
22 issue we ran into in Las Vegas. So we were very  
23 sensitive to that -- industry was very sensitive to  
24 that. And that's what prompted NSF to eventually  
25 add those requirements to NSF 14.

1 Q Do you know whether NIBCO ever sold these fittings?

2 A No, sir, I don't know.

3 Q It's possible NIBCO sold these fittings?

4 A That's a possibility, yes.

5 Q In order to determine whether these fittings may  
6 suffer from dezincification issues in the field,  
7 did you need to conduct the metals analysis that  
8 you did conduct?

9 A I'm not sure I understand that question.

10 Q Without performing the metal analysis that you  
11 described to me earlier, would you have been able  
12 to determine that these fittings may suffer from  
13 dezincification problems in the field?

14 MR. KUHLMAN: Object to form.

15 A Yes, sir.

16 BY MR. SHAMBERG:

17 Q You would have been able to determine that?

18 A Yes, sir.

19 Q How would you have done that?

20 A It would have been evaluating via the two test  
21 methods in NSF 14, the DZR test method as well as  
22 the stress corrosion test method. Those would be  
23 the good indicators for potential for failure in  
24 the field.

25 Q Does NIBCO currently conduct those tests on all

1           fittings that are supplied by other manufacturers?

2       A     Yes, sir.

3                               MR. KUHLMAN:   Object to form.

4   BY MR. SHAMBERG:

5       Q     Has it always?

6       A     I can't answer that, I don't know.

7       Q     When did NIBCO begin performing these analyses for  
8           NSF 14 and the other standard you mentioned?

9       A     Both of them -- both test methods are requirements,  
10           okay, DZR and stress are in that NSF 14.

11       Q     When did NIBCO begin conducting those tests on  
12           fittings supplied by other manufactures?

13       A     That I can't answer, okay, I'll leave it at that.  
14           That I can't answer, I don't know.

15       Q     Okay. How long have you been the product engineer  
16           for PEX fittings?

17       A     Just about the time frame that this is dated, would  
18           have been 20 -- probably 2012, 2013.

19       Q     Okay. Who was in that role before you?

20       A     I'm not sure. We had a person dedicated strictly  
21           to PEX fittings, okay. We do have on staff a  
22           couple of metal experts, okay, that would have done  
23           our alloy testing and approval.

24                               MR. SHAMBERG:   Can you read that  
25                               back?

1 (The answer was read back.)

2 BY MR. SHAMBERG:

3 Q Who were those metal experts?

4 A Those would be Ben Lawrence and Jim Laforce.

5 Q One more question about this document before we  
6 move on. In your email of March 14th after you  
7 say, "Data suggest we could see significant field  
8 issues with these fittings," you say, We are  
9 conducting a significant amount of DZ and SCC  
10 testing of these products to develop a good  
11 understanding of expected performance. To my  
12 knowledge such comprehensive studies of other NIBCO  
13 PEX fittings were not conducted. We may want to  
14 consider.

15 Sitting here today, do you have knowledge as  
16 to whether any of these other PEX fittings that you  
17 identified here, the C 377, C486 or C693 were  
18 studied for potential dezincification issues in the  
19 field?

20 A The 693 was, okay, the other two, to my knowledge,  
21 okay, I don't have any knowledge, okay, what  
22 testing was done on those two alloys. But the 693  
23 was because that's the product we are currently  
24 using.

25 Q Does C377 and C486 --

1 A Yes, sir.

2 Q -- were those products being sold to market as of  
3 the date of this email?

4 A That I don't have any knowledge of. I can't state  
5 with any certainty what alloy we were using in  
6 2013, 2012.

7 Q Aside from me showing it to you today, do you have  
8 a memory of this email exchange?

9 A No, sir, I don't.

10 Q So you don't know whether you were the product  
11 engineer for PEX fittings as of the date of this  
12 email?

13 A It would have been very early -- if I was product  
14 engineer at that time it would have been very  
15 early. I mean, I sort of took on the  
16 responsibility when we transitioned over to the led  
17 free and that would be the 693 alloy and that  
18 happened probably in 2013.

19 Q Okay. And you had represented that the testing for  
20 meeting the criteria in NSF 14 was conducted for  
21 the C693?

22 A Yes, sir.

23 Q Who conducted that testing?

24 A It was conducted over at their lab at my request.

25 Q What were the conclusions?

1       A     I would have to see the test reports, okay, but I  
2             don't recall any issues.

3       Q     Okay. Do you know whether they passed?

4       A     Yes.

5       Q     They did pass?

6       A     Yes, sir.

7                             MR. SHAMBERG: This is probably a  
8                             good time for five minutes.

9                             MR. KUHLMAN: Okay.

10                            (A short break was held.)

11    BY MR. SHAMBERG:

12       Q     Before we go on, Mr. Sexton, I had one follow-up  
13             question. Earlier you had testified from 2006 to  
14             2012 you might perform about half a dozen failure  
15             analyses of field-returned PEX tubing per year.  
16             Does that sound about right?

17       A     Yes, sir.

18       Q     Under what circumstances would you have performed  
19             those six or so failure analyses per year?

20       A     Those were specifically at the request of Randy  
21             Doering.

22       Q     Why would Randy specifically request that you do a  
23             particular failure analysis?

24       A     You would have to ask Randy. Once again, I don't  
25             know what all factors he considered in deciding

1           which samples to send to me or why he would send  
2           them to me.

3       Q    Did he ever discuss that with you?

4       A    No. I mean, it was I would receive the samples,  
5           okay, do my evaluation as I pretty much outlined  
6           for you and send the results back to him.

7       Q    And he never once told you, Earl, I want you to  
8           look at this, here's why?

9       A    Not that I recall, no.

10      Q    Do you happen to recall whether the failure  
11           analyses you performed as compared to the ones that  
12           would have been performed by others at NIBCO dealt  
13           with failures that could have resulted in  
14           significant liabilities to NIBCO?

15      A    That I don't know.

16      Q    We will keep going with the email chains here. I  
17           will show you one more to take a look at.

18           (Exhibit 19 was marked for identification.)

19   BY MR. SHAMBERG:

20      Q    Mr. Sexton, I'll just let you know you should feel  
21           free to review this document in its entirety, of  
22           course. My questions are gonna focus on your email  
23           from June 29th on the first page.

24      A    Okay, sir.

25      Q    Okay. So on the first page of this document, as I

1 indicated, there is an email from you to Ken McCoy  
2 and Jerrod Brigham on June 29, 2011, 11:24 a.m.  
3 And you say several things in here. We will get  
4 into each of them but I want to ask specifically in  
5 the -- what would be the third paragraph, I  
6 suppose, in the email, the second sentence you say,  
7 "Both observations suggest exposure to aggressive  
8 water." And then the bottom email, very last  
9 sentence of the email you say, "The observed  
10 discoloration and microcracking of the inner wall  
11 surface suggest attack by aggressive water."

12 What do you mean when you say "aggressive  
13 water"?

14 A Aggressive water can be any number of things, can  
15 be high levels of chlorine, high levels of  
16 chlorine, it can be very aggressive -- what's the  
17 word? Ion activity as defined by ORP, can be high  
18 temperatures, can be high pressure, so either  
19 individually or a combination of those factors.

20 Q Okay. You said ion activity?

21 A Yes, sir.

22 Q What do you mean by ion activity?

23 A Ion means water tends to be very corrosive, okay.  
24 If you're running it through iron pipes, okay,  
25 you're gonna get iron particles that are broken

1 off, okay, and that are in that water, okay, that  
2 increases its ion aggressiveness as defined by ORP.  
3 ORP is a measurment of that aggressiveness. And  
4 the higher that ORP value is the more aggressive  
5 that water is the more likely you are to attack the  
6 PEX tubing.

7 Q Okay. You also said that chlorine levels, heat --

8 A Yes, sir.

9 Q -- and pressures can all be factors?

10 A Yes, sir.

11 Q At what temperature does water become aggressive?

12 A Any elevation of temperature makes water more  
13 aggressive. I mean, it starts at -- I mean, the --  
14 chemically speaking, okay, there is an equation  
15 called the Arrhenius equation that says that  
16 chemical reactivity doubles with every 10 --  
17 increase of 10 degrees Celsius in temperature. So  
18 any increase in temperature makes water more  
19 aggressive.

20 Q Would you describe water that was 50 degrees  
21 Fahrenheit as aggressive?

22 A Yes.

23 Q Is there any water you wouldn't term aggressive?

24 A No, sir.

25 Q At what chlorine level does water become

1 aggressive?

2 MR. KUHLMAN: Object to form.

3 A I'm not sure I can answer that question.

4 BY MR. SHAMBERG:

5 Q Why not?

6 A I haven't seen any studies studying the effects  
7 of -- or I do not know the relationship between ORP  
8 and chlorine levels.

9 Q Okay. So you couldn't say -- sitting here today  
10 you couldn't give a chlorine level that would make  
11 water aggressive versus non-aggressive?

12 A No, sir.

13 Q What about pressure, at what pressure does water  
14 become aggressive?

15 A Pressure -- pressure doesn't make water aggressive,  
16 okay, but pressure, like temperature, accelerates  
17 that reactivity, accelerates just like the  
18 Arrhenius equation that we talked about. Okay?  
19 Temperature accelerates the chemical reaction.  
20 Pressure does the same thing so individually they  
21 don't make the product -- or don't make water  
22 aggressive but they cause the reactivity to go up.

23 Q I see. So you couldn't state at X PSI water  
24 becomes aggressive?

25 A No.

1 Q Okay. So you have said that water can be  
2 aggressive at any temperature. Correct?

3 A Yes, sir.

4 Q And that there isn't a particular chlorine level  
5 you could identify at which water would be become  
6 aggressive. Correct?

7 A Yes, sir.

8 Q And there isn't a particular pressure at which  
9 water would become aggressive?

10 A Right.

11 Q So I'm just trying to understand. In this email  
12 that you sent on June 29 of 2011 when you  
13 contribute certain of your observations to attack  
14 by aggressive water, what are you trying to  
15 indicate with that statement?

16 A It's the combination of we did not see  
17 manufacturing defects, we did not see any evidence  
18 of physical abuse or deformation, okay, that would  
19 suggest an installation error. Okay, so water,  
20 okay, the failure or the attack by the water was,  
21 okay, what was left and the data supported that,  
22 okay, the white residue that was observed and then  
23 these other factors, okay, temperature, pressure,  
24 the ion capability of the water, aggressiveness of  
25 the water, those could also contribute to make the

1 water aggressive.

2 Q Do you recall what the temperature of the water at  
3 issue in this particular PER was?

4 A No, sir, I do not.

5 Q Do you recall what the chlorine levels were?

6 A No, sir, I do not.

7 Q In your view does what would qualify as aggressive  
8 water differ between PEX-B and PEX-C tubing?

9 A Could you clarify that? I'm not sure I understood  
10 it.

11 Q Sure. If you have water at a particular  
12 temperature at a particular chlorine level with a  
13 particular pressure and with a particular ion  
14 activity, could that water be aggressive when used  
15 in PEX-C tubing but, say, not aggressive when used  
16 with PEX-B tubing?

17 A No. It's gonna be aggressive for both.

18 Q Okay. So let me step back for a second. NIBCO had  
19 manufactured, beginning in 2006, and sold prior to  
20 that a tubing with a designation of 1006; is that  
21 right?

22 A Yes, sir.

23 Q Okay. And that 1 at the beginning, does that  
24 indicate the chlorine resistance of the tubing?

25 A Yes, sir.

1 Q And are there other numerical codes that are  
2 assigned to that chlorine resistance PEX tubing?

3 A Yes.

4 Q What are those numbers?

5 A Currently there are three different designations --  
6 four designations, okay. There is a 0, there is a  
7 1, there is a 3 and a 5.

8 Q Okay. And I'll let you handle three of them but 0,  
9 I believe, means it has never been tested for  
10 chlorine resistance; is that correct?

11 A That's correct.

12 Q Can you describe what the 1, 3 and the 5 indicates?

13 A It's -- all of them are measurements of allowed  
14 exposure to hot water. Okay, 1 allows a  
15 25 percent -- or exposure to 140-degree water for  
16 25 percent of the time, exposure to 73-degree water  
17 for 75 percent of the time. Three allows  
18 exposure -- and it's split 50/50 to both 140 and  
19 73-degree water. Five is exposure 100 percent of  
20 the time to 140-degree water.

21 Q Okay. So let's say, for example, you're looking at  
22 tubing that has a 1 designation for chlorine  
23 resistance versus another PEX tubing that has a 5  
24 designation for chlorine resistance. Will water  
25 that is aggress -- deemed aggressive for a 1 rated

1 tubing necessarily mean that that water would be  
2 aggressive for a 5 rated tubing?

3 A Yes, sir.

4 Q So aggressive water always means the same thing no  
5 matter what the application is?

6 A Yes, sir.

7 Q What's a die line?

8 A Die line is a -- would be a manufacturing defect,  
9 okay, it's when either the extrusion tie is --  
10 become damaged or something has gotten caught in  
11 the die that puts an imperfection in the wall of  
12 the tubing.

13 Q So it's an -- essentially an imperfection in the  
14 extrusion process?

15 A Yes, sir.

16 Q How -- actually through that extrusion process, how  
17 does the die line form? What happens that causes a  
18 die line to form?

19 A Well, you're pushing molten material, okay, through  
20 a die that is in the shape of a tube, okay, and if  
21 there is an imperfection in the die, okay, that  
22 material is forced around that imperfection, okay,  
23 and that will show up as a die line.

24 Q Can anything else cause a die line to form?

25 A By definition, no.

1 Q Can a buildup of charred polymer cause a die line  
2 to form?

3 A Yes.

4 Q How would that happen?

5 A Charred material, if it sticks to the die, okay,  
6 surface of the die then that's possible, okay.

7 It's sitting there, okay, once again, the material  
8 has to flow around it, okay. Now unless there is  
9 evidence of char material in the sample you're  
10 looking at, you're not gonna able to tell if it was  
11 due to some sort of buildup on the die or a defect  
12 in the die.

13 Q So we were talking about aggressive water.

14 Is there an industry standard that defines  
15 what aggressive water is?

16 A There is not a standard. There's a measure of  
17 aggressiveness.

18 Q What's that measure?

19 A That would be an ORP, the Oxidative Reductive  
20 Potential.

21 Q I believe you mentioned that in relation to the ion  
22 activity earlier; is that correct?

23 A Yes, sir.

24 Q And does that rating take into account the heat of  
25 the water?

1 A Does not take into account the heat, no.

2 Q Does it take into account the chlorine level of the  
3 water?

4 A Yes.

5 Q Does it take into the account the pressure that the  
6 water is under?

7 A No, sir.

8 Q What's the mechanism by which aggressive water will  
9 attack a PEX pipe?

10 MR. KUHLMAN: Object to form.

11 A The chemical reaction?

12 BY MR. SHAMBERG:

13 Q Yes.

14 A Okay. Basically you have got a charged particle or  
15 an ion in the water, okay, chlorine, metal, others  
16 that will come along and as it tries to get back to  
17 a neutral state, okay, is taking off, likely,  
18 hydrogen from the polymer backbone, okay. That  
19 removal of that hydrogen from the polymer, okay,  
20 allows the polymer either -- it forces it to either  
21 form a double bond or it breaks the chain, okay.  
22 And either one eventually leads to weakening of  
23 that chain, allows it to get into shorter and  
24 shorter pieces, which reduces the strength.

25 Q Okay. Is there a term for that chemical process?

1 A Eventually you get chain scission. That's spelled  
2 S-C-I-S-S-I-O-N, I believe.

3 Q Why don't we get to that now. What's chain  
4 scission?

5 A Where you break the chain. Okay, polymers by  
6 definition, okay, are a bunch of individual monomer  
7 products that are linked together to form very  
8 large chains. Okay, so it's chains that give a  
9 polymer its performance, okay, its strength,  
10 chemical resistance, what have you. And when you  
11 start to shorten those chains, okay, those  
12 properties tend to decrease so you're breaking the  
13 chains up.

14 Q Okay. Is there any relationship between chain  
15 scission and oxidative degradation?

16 A Oxidative degradation can lead to chain scission.

17 Q How does oxidative degradation lead to chain  
18 scission?

19 A Okay, oxidative attack, okay, as I explained, okay,  
20 basically you're removing the hydrogen, okay, from  
21 the polymer backbone, okay, forcing that polymer to  
22 react, okay, either form a double bond or it may  
23 split. Okay, then, once again, just continue the  
24 reaction to the point where that chain, okay, gets  
25 weaker and weaker and be -- begins to break.

1 Q What is microcracking?

2 A Microcracking is very small cracks usually not seen  
3 by the visual eye, okay, seen like under  
4 magnification. But the very initial stages,  
5 okay -- well, the initial stage would be what they  
6 call crazing, okay, but in chemical cracks you go  
7 crazing to microcracks. Those cracks, now because  
8 you actually have very small cracks in the surface,  
9 okay, they will allow the media water, okay, to be  
10 exposed to more surface area of the tubing, okay,  
11 and that leads to the cracks opening, okay, more  
12 areas for the water to attack the tubing.

13 Q Okay. What was that first word that you said for  
14 microcracking? Crazy?

15 A Crazing.

16 Q Crazy like loony?

17 A No. C -- well, spelled the same way,  
18 C-R-A-Z-I-N-G.

19 Q Crazing. I see.

20 A Crazing.

21 Q Okay. What's the mechanism of microcracking?

22 MR. KUHLMAN: Object to form.

23 A Not sure I understand that question.

24 BY MR. SHAMBERG:

25 Q What causes microcracking?

1       A     It can be any variety of -- can be due to, okay, a  
2             chemical attack such as what we were talking. It  
3             could be also due to over-pressurization.

4       Q     Okay. So the oxidative degradation that we talked  
5             about is a potential cause of microcracking?

6       A     Yes, sir.

7       Q     I just want to have a little bit better  
8             understanding of kind of the issue you're  
9             describing in this email that we were looking at.  
10            So this is -- so you're doing an examination here  
11            of a field return failed three-quarter inch terra  
12            cotta PEX-C tubing. You say, "Visual examination  
13            of the questionable tubing shows a slit in the  
14            outer wall approximately 1 inch in length running  
15            in the flow direction. This slit appears to be  
16            aligned with a crack running along the inner wall  
17            in the same direction."

18            So let's stop right there. What does that  
19            tell you, just that information?

20       A     It begins to eliminate some possibilities. Okay?  
21             It suggests that the -- this would be -- what  
22             people would call a classical failure for tubing,  
23             okay, in which the failure is going to be  
24             predominantly hydrostatic based -- okay, so that  
25             the pressure is on the inner wall of the failure,

1           okay, causes the split to run along the tubing as  
2           opposed to across. So you begin to eliminate  
3           possibilities of causes.

4       Q    Okay. What possibilities do you eliminate at that  
5           point?

6       A    At that time would be bending would be the biggest  
7           thing.

8       Q    Okay. So mishandling or an installation issue --

9       A    Yes, sir.

10      Q    -- that kind of thing?

11      A    Yes, sir.

12      Q    Then you go on, "Microscopic examination shows the  
13           inner wall to be discolored (whitish discoloration)  
14           and microcracking. Both observations suggest  
15           exposure to aggressive water."

16                So I may know the answer here but when you see  
17           that discoloration on the inner wall and  
18           microcracking, what information does that give you  
19           about the failure mechanism?

20      A    Okay. Gives you some indication that there had  
21           been some sort of chemical attack that's gone on.  
22           There is something that has actually attacked the  
23           polymer, causing the cracking, okay, the whitish  
24           residue, okay. Without analysis we don't know if  
25           that's from something in the water or is that

1 degraded polymer.

2 Q You don't know if it's something in the water?

3 A That's correct.

4 Q But you can conclude that the cause is aggressive  
5 water?

6 A Yes, sir.

7 Q What's the basis for that conclusion?

8 A The fact that we still have the microcracking and  
9 the whitish residue. Something attacked the  
10 tubing.

11 Q Would this sort of failure mechanism occur if the  
12 tubing was insufficiently stabilized?

13 MR. KUHLMAN: Object to form.

14 A It can, yes, sir.

15 BY MR. SHAMBERG:

16 Q That's a potential cause?

17 A That's a potential cause.

18 Q Did you -- in this particular instance did you rule  
19 that cause out?

20 A This specific sample, no, I don't believe so.

21 Q Okay. You just concluded that it was the  
22 aggressive water?

23 A Yes, sir.

24 Q And aggressive water is sort of an amorphous term  
25 as we've agreed. Right?

1 A Yes.

2 Q Is PEX-C tubing appropriate for use in residential  
3 plumbing applications?

4 A Yes, sir.

5 Q Okay. Are there certain conditions that would make  
6 it not appropriate for use in a residential  
7 plumbing application?

8 A Yes, sir, there can be.

9 Q What would those conditions be?

10 A Excessive pressure, elevated temperatures, very  
11 high chlorine levels in the water, okay, very high  
12 ion activity of the water. So those are  
13 applications or instances that are -- PEX is going  
14 to be probably unacceptable.

15 Q Okay. Is PEX tubing appropriate for use in attics?

16 A Yes, sir.

17 Q Okay. That's true of both the 1006 and the 3308  
18 products?

19 A Yes, sir.

20 Q Does NIBCO provide installation manuals or  
21 instructions on how the PEX-C products should  
22 installed?

23 A They do today, yes, sir.

24 Q Okay. When did NIBCO begin doing that?

25 A That I do not know.

1 Q Was it after you started at NIBCO?

2 A That I do not know.

3 Q Have you been involved with the review or drafting  
4 of any of the language for those manuals or  
5 instructions?

6 A No, sir.

7 Q So you never looked at them?

8 A No, sir.

9 (Exhibit 20 was marked for identification.)

10 MR. KUHLMAN: Are you familiar with  
11 the origin of that document?

12 MR. SHAMBERG: It was produced to us  
13 by NIBCO.

14 MR. KUHLMAN: Okay.

15 MR. SHAMBERG: I'm actually going to  
16 ask him some questions about that.

17 MR. KUHLMAN: Okay.

18 BY MR. SHAMBERG:

19 Q Okay. So this first page of this document is a  
20 letter, let's say, from NSF regarding new PEX  
21 material designation codes; is that correct?

22 A Yes, sir.

23 Q And then the next two pages are a document with the  
24 title "CHLORINE NOTES FOR PEX TUBING" and there is  
25 a -- do you see a vertical line kind of it looks

1 from a printer or copier running up the right side  
2 of the page?

3 A Yes, sir.

4 Q That line also appears on the NSF letter at the  
5 beginning. Correct?

6 A Yes, sir.

7 Q Have you ever seen this Chlorine Notes for PEX  
8 Tubing document before?

9 A No, sir.

10 Q Okay. So you have no idea when it was generated or  
11 who generated it?

12 A No, sir, I do not.

13 Q And you understand that it was produced to us in  
14 this litigation by the attorneys for NIBCO.  
15 Correct?

16 A No, sir.

17 Q Well, I'll represent to you that it was provided to  
18 us by NIBCO's attorneys.

19 A Thank you.

20 Q If we look at the Bates number 37750, the page that  
21 has "CHLORINE NOTES FOR PEX TUBING" at the top?

22 A Uh-huh.

23 Q The fourth bullet point from the bottom starts with  
24 "Tubing with the PEX 1006 and or NSF P-171 CL-TD  
25 ratings are suitable for applications where hot

1 water usage is intermittent and the tubing is run  
2 in a basement or under the slab, where the water  
3 temperature is allowed to cool down to ambient when  
4 there is no hot water demand."

5 The next bullet goes on "These ratings are not  
6 suitable for installation where domestic hot water  
7 continuous circulation loops and or where water  
8 lines are run in an attic space. These types of  
9 systems typically keep system hot water  
10 temperatures from dropping back down to the rated  
11 end use condition of 73 degrees Fahrenheit at 75  
12 percent usage especially in Southern Climates."

13 Do you agree with the statements that I just  
14 read?

15 MR. KUHLMAN: Object to form.

16 A No, sir I do not.

17 BY MR. SHAMBERG:

18 Q What do you disagree with?

19 A In fact, if you go to the summary, the very first  
20 bullet point in the summary says if the tubing is  
21 labeled PEX 5006 or 1006 with a CL-R there is no  
22 concern for installations in attic in hot water  
23 recirculation systems. I disagree with the  
24 statement simply because, okay, there is millions  
25 and millions of feet of 1006 tubing, okay,

1 produced not only by NIBCO but also by several  
2 other manufacturers that are installed and  
3 performed very acceptably in attic situations for a  
4 number of years.

5 Q Okay. That part you read from in the summary at  
6 the end of the document refers to the PEX 5006 or  
7 1006 with CL-R?

8 A Yes.

9 Q What does that CL-R indicate?

10 A That is -- that's a old designation from the P-171  
11 test report. I'm not sure what the CL-R translates  
12 directly to or what that means.

13 Q Okay. So in your mind is there -- see, so at the  
14 end of the summary if you look at the final bullet  
15 there, it says, If the tubing is labeled PEX 1006  
16 with no CL-R rating the tubing shall not exceed 75  
17 percent usage at an end use condition of greater  
18 than 73 degrees Fahrenheit.

19 Is there a difference then between PEX 1006  
20 without that CL-R and PEX 1006 with the CL-R?

21 A Once again, I'm not sure what the CL-R means, okay,  
22 so I can't answer that question. The 1006, the 1  
23 designation means it has been tested for chlorine  
24 resistance. To my mind, okay, that means they're  
25 equivalent.

1 Q There is also this term CL-TD?

2 A Uh-huh.

3 Q Do you know what CL-TD refers to?

4 A That's the old traditional domestic designation.  
5 Once again, that came out of the P-171 test  
6 methodology, okay, and that's equivalent to the  
7 today's 1000 series tube for chlorine resistance.  
8 That would be the 75 percent time at 73 degrees,  
9 25 percent at 140 degrees.

10 Q Okay. So do you know what the difference is  
11 between CL-R and CL-TD PEX tubing?

12 A No, sir, I do not.

13 Q So the bullets that I was noting earlier with  
14 respect to use in attics --

15 A Uh-huh --

16 Q -- the document states that tubing with the PEX one  
17 1006 and or NSF than P171, CL-TD ratings are  
18 suitable for applications where hot water usage is  
19 intermittent. These ratings are not suitable for  
20 installation where domestic hot water continuous  
21 circulation loops and or where water lines are run  
22 in an attic space.

23 So that's referring to tubing with the PEX  
24 1006 CL-TD rating. Correct?

25 MR. KUHLMAN: Can I get a continuing

1 objection just to the use of this  
2 document as a single document suggesting  
3 that it all came from NSF when --

4 MR. SHAMBERG: Sure, yeah, you can  
5 have that objection.

6 MR. KUHLMAN: We can talk more about  
7 it on the break but --

8 MR. SHAMBERG: That's fine.

9 BY MR. SHAMBERG:

10 Q So this -- this particular bullet here is referring  
11 to the PEX 1006 with that CL-TD rating. Correct?

12 A Yes, sir.

13 Q And then you pointed out that that first bullet in  
14 the summary that there are regarding no concerns  
15 for installation in the attic or in hot water  
16 recirculation systems?

17 A Yes, sir.

18 Q And that particular bullet is referring to PEX with  
19 the 1006 with the CL-R rating. Correct?

20 A Yes, sir.

21 Q Is PEX 1006 tubing appropriate for use in  
22 residential plumbing applications that employ a  
23 recirculation system?

24 A If that recirculation system is on a timer.

25 Q Okay. What's the significance of the timer?

1 A Timer, once again, draws the -- remember that the  
2 1000 is predicated only 25 percent of the time is  
3 it allowed to be at 140 degrees.

4 Q Okay.

5 A So, in fact, I believe our recommendations are that  
6 timer, the maximum during the day is six or eight  
7 hours that you're allowed to have that  
8 recirculation system on, okay. Our recommendation  
9 is, folks, during the nighttime when you don't need  
10 hot water or if you work during the day and aren't  
11 home, turn that recirc system off.

12 Q Okay. Do you know whether NIBCO has ever advised  
13 its customers that the PEX 1006 tubing should not  
14 be used in homes that employ recirculation systems?

15 A As I just stated, okay, we do recommend that it's  
16 used in recirc systems but those recirc systems  
17 have to be on a timer.

18 Q Has NIBCO ever advised its customers that there are  
19 certain restrictions in the use of PEX 1006 tubing  
20 in a recirculation system?

21 A That I cannot answer, that I don't know.

22 Q Because you weren't involved in drafting any of the  
23 language that would have gone to the customers?

24 A That's correct.

25 Q Who was responsible for that?

1 A That would have been the general manager, Randy  
2 Doering at that time frame and or Tom Coe.

3 Q To your knowledge since NIBCO began selling PEX  
4 tubing, has anyone other than Mr. Doering or  
5 Mr. Coe been responsible for drafting the language  
6 included in the installation manuals?

7 A That I have no knowledge of, don't know.

8 Q Guess what? Another email.

9 (Exhibit 21 was marked for identification.)

10 A Okay, sir.

11 BY MR. SHAMBERG:

12 Q Okay. So this is an email chain between yourself,  
13 Debbie Premus and a few other NIBCO employees  
14 regarding the oxidative stability of DURA-PEX terra  
15 cotta tubing. Correct?

16 A Yes, sir.

17 Q And I wanted to start with the first email  
18 chronologically, which would be your email from  
19 April 16 at 12:15 p.m. It includes some data and  
20 then on the final page here, 37121 is the Bates  
21 number --

22 A Okay.

23 Q -- you have performed some OIT testing and you  
24 state that that testing confirms the oxidative  
25 stability time of terra cotta product is 10 minutes

1 or less falling into the marginal performance  
2 range.

3 So essentially what you're finding that there  
4 are some low oxidative stability times with the  
5 terra cotta tubing here. Right?

6 A Yes, sir.

7 Q If tubing is inadequately stabilized -- strike  
8 that.

9 Can tubing fail in the field if it's  
10 inadequately stabilized?

11 A Yes, sir.

12 Q And would oxidative degradation be a potential  
13 cause of failure in insufficiently stabilized  
14 tubing?

15 MR. KUHLMAN: Object to form.

16 A No, sir.

17 BY MR. SHAMBERG:

18 Q Why is that?

19 A 'Cause oxidative failure wouldn't be the cause.

20 Q Why?

21 A Because it goes the other way around. Oxidative  
22 failure is the result, not the cause.

23 Q So could exposure to chlorine be a cause?

24 A Exposure could be a contributing factor, yes.

25 Q Is it possible that it could be the sole cause of a

1 failure if tubing is insufficiently stabilized?

2 MR. KUHLMAN: Object to form.

3 A No.

4 BY MR. SHAMBERG:

5 Q Why not?

6 A 'Cause the failure in oxidative failure you need a  
7 combination of not only of the environment, the  
8 chlorine, but you also need a stress, which is  
9 pressure. So you need the combination of both.

10 Q So exposure to chlorine in the field will not  
11 result in failure of the PEX-C tubing unless  
12 coupled with over-pressurization?

13 A Over a very long period of time it would.

14 Q What's a long period of time?

15 A Some of the data I have seen you're talking  
16 hundreds of years.

17 Q Hundreds of years?

18 A Yes, sir.

19 Q And you're aware that the plaintiffs in this case,  
20 their tubing has failed in significantly less than  
21 hundreds of years. Correct?

22 A No, sir, I'm not aware of that.

23 Q So you believe their tubing may have been in use  
24 for hundreds of years?

25 A No. I don't know specifically what complaints this

1 is involving or how long it's been installed.

2 Q Okay. I'll represent to you that it's been less  
3 than hundreds of years.

4 So continuing on with this email you stated,  
5 "It's recommended we continue as we are and do not  
6 address the stability of the terra cotta product at  
7 this time."

8 Why did you make that determination?

9 A Because OIT is not -- has never been a requirement  
10 of 876, which is the requirement for PEX tubing  
11 that all PEX manufacturers need to meet. So  
12 because it is not a requirement, okay, there is no  
13 defined criteria for OIT testing for PEX tubing in  
14 876. Oxidative testing in 876 is defined by  
15 chlorine resistance, defined -- which is tested  
16 under F 2023, okay, which is that extrapolated 50  
17 years to time -- or failure, okay. Terra cotta has  
18 always met that criteria.

19 Q So is your sole concern with the quality of PEX-C  
20 tubing meeting third-party certification standards?

21 A No. The concern is making good-performing tubing.

22 Q You want to prevent failures in the field. Right?

23 A Yes, sir.

24 Q You want to do everything you can to do that?

25 MR. KUHLMAN: Object to form.

1 A Yes, sir.

2 BY MR. SHAMBERG:

3 Q So if we go to Debbie Premus' response to your  
4 email --

5 A Yes, sir.

6 Q And who is Debbie Premus?

7 A Debbie Premus is the quality manager at our Lebanon  
8 facility?

9 Q Was she previously employed by CPI?

10 A Yes, sir, I believe so.

11 Q And did she come over to NIBCO as part of the  
12 acquisition of the CPI?

13 A Yes, sir.

14 Q So in Debbie's response the same day about a half  
15 hour later addressed to you she says, "Why wouldn't  
16 we want to look at improving the OIT for terra  
17 cotta color pipe? The chlorine test is only an  
18 extrapolation, an estimation of the number of years  
19 of service in specific water conditions. Aren't we  
20 concerned that if we continue to market  
21 underprotected (sic) terra cotta in regions with  
22 aggressive water (i.e. Charlotte and Mobile, etc.)  
23 that a continued steady stream of oxidative  
24 failures would cost more in the long run than  
25 tweaks to the color formulation/UV/AO additive?

1 A Just thinking out loud."

2 So I have a couple questions here. If the  
3 only way that insufficient stabilization can cause  
4 field failures is either coupled with  
5 over-pressurization or over the course of hundreds  
6 of years, why is Debbie concerned about the low  
7 stabilization of this tubing?

8 MR. KUHLMAN: Object to form.

9 A You've have to ask Debbie that.

10 BY MR. SHAMBERG:

11 Q But you weren't concerned?

12 A No. Based upon the results that we were seeing  
13 from -- with 2023 and the requirements of 876.

14 Q So you were meeting the standards?

15 A We were meeting the standards.

16 Q She describes the tubing here as under protected  
17 terra cotta.

18 Would you similarly describe this terra cotta  
19 tubing as under protected?

20 A No, sir.

21 Q Did you have any concern at this time that you  
22 would see a continued steady stream of oxidative  
23 type failures?

24 A No, sir.

25 Q Then she mentions these regions with aggressive

1 water and she identifies Charlotte and Mobile, I  
2 assume Mobile, Alabama.

3 Were you aware at the time of this email that  
4 Charlotte was an area where there was aggressive  
5 water?

6 MR. KUHLMAN: Object to form.

7 A I became aware that Charlotte was an area of  
8 concern, okay. I do not recall when I became  
9 aware, if it was before or after this April 2008  
10 date.

11 BY MR. SHAMBERG:

12 Q Okay. Why was Charlotte -- regardless of when you  
13 became aware, why was Charlotte an area of concern?

14 A Because there had been a cluster of failures, okay,  
15 that not only NIBCO experienced but before us CPI  
16 had experienced in this area. As it was explained  
17 to me, okay, most of those failures were due to the  
18 contributing factors, people were installing the  
19 tubing, okay, without pressure relief valves or  
20 expansion tanks, okay, because they were not  
21 required in the codes. And, once again, as it was  
22 explained to me, okay, NIBCO -- or CPI was  
23 instrumental in working to get those requirements  
24 written into building codes, okay, to address that  
25 situation.

1 Q You said as explained to you, who explained that to  
2 you?

3 A I can't specifically remember who told me that.

4 Q Are there certain people that you would have had  
5 these discussions with?

6 A Yes, sir.

7 Q Who are those people?

8 A Those -- that could have been Randy Doering, that  
9 could have been Tom Coe, I believe one or two other  
10 people involved with CPI, okay, that came along  
11 with the acquisition that I might have had that  
12 discussion with. But a specific person or source  
13 of that information, okay, I can't recall.

14 Q To your knowledge were other manufacturers or  
15 sellers of PEX tubing other than CPI or NIBCO  
16 experiencing failures in the Charlotte area?

17 A Not that I'm aware of.

18 Q And there is also this reference to Mobile,  
19 Alabama. At the time of this email were you aware  
20 that Mobile, Alabama was another trouble spot?

21 A No, sir.

22 Q Did you become aware of that fact?

23 A No, sir.

24 Q Are you aware of any other areas that have been  
25 problematic for NIBCO or CPI PEX tubing?

1 A No, sir.

2 Q So Charlotte's the only one you've ever been aware  
3 of that?

4 A Let me correct that. The two depositions that I  
5 gave previous, okay, seemed like we had issues in  
6 San Antonio.

7 Q Okay. And you only became aware of that through  
8 litigation?

9 A Yes, sir.

10 Q Just, again, to confirm, you're the product  
11 engineer for PEX tubing. Correct?

12 A Yes, sir.

13 Q Okay. So then we'll finish up with your email  
14 response at 7:04 p.m. on April 16. You say, "You  
15 realize I was kidding about welcoming those  
16 questions and comments." I assume that was a joke?

17 A Yes, sir.

18 Q And you say, "You raise a good question about the  
19 marginal performance of terra cotta products and  
20 the potential for failures in aggressive water  
21 locations.?"

22 So when you wrote that did you believe there  
23 was a potential for failure in aggressive water  
24 locations of the terra cotta product?

25 A Well, aggressive water is always going to cause

1 increased possibility for failure.

2 Q Okay. So in that you're trying to acknowledge that  
3 Debbie's raising a fair point?

4 A Yes.

5 Q You identify there is a risk delaying reformulation  
6 of the terra cotta color but I'm also concerned  
7 about the possible need to reformulate all our  
8 cothers -- all our colors to address weatherability  
9 requirements being discussed for F876. You say  
10 you're working with JANA and you suggest that you  
11 not -- you say, I propose we do not put ourselves  
12 in a position of having to reformulate the terra  
13 cotta colorant, testing for CL resistance and then  
14 have to repeat the process again in six to 12  
15 months.

16 So essentially are you saying here that  
17 because you're working on this weatherability issue  
18 and that's gonna take a little bit of time, you  
19 don't have want to reformulate the product twice?

20 A Yes, sir.

21 Q Because that's gonna cost more. Right?

22 A Could cost more also takes extremely long periods  
23 of time.

24 Q Okay. But you weren't concerned about that risk in  
25 delaying the reformulation that you identified?

1 A No, sir.

2 Q Okay.

3 (Exhibit 22 was marked for identification.)

4 A Okay sir.

5 BY MR. SHAMBERG:

6 Q Okay. So this is another email chain in late  
7 August of 2008 with the subject line "PEX Terra  
8 Cotta Reformulation." This is about four months  
9 after that email chain we were just discussing.  
10 Right?

11 A Yes, sir.

12 Q About the terra cotta and low stability numbers?

13 A Yes, sir.

14 Q And in your email to Steve Noto -- first, am I  
15 pronouncing that right? Is it Noto?

16 A Yes.

17 Q Who's Steve Noto?

18 A Steve was my -- at this time was my manager, okay,  
19 I reported to him.

20 Q Okay. What would his job title have been at this  
21 time?

22 A That I don't recall.

23 Q Is he still at NIBCO?

24 A Yes, sir.

25 Q Is he still in that same role that he was

1           regardless of what it was called?

2       A    No.  He is now our -- I can't recall if it's  
3           manager or director but regards of advanced  
4           technology.  He gets involved with our plants.

5       Q    So in your email to him here on August 20th, you  
6           say, "Steve, As you are aware, we have been working  
7           with Colortech to reformulate the Terra Cotta color  
8           and improve its chlorine resistance."

9                   And then explain, "Colortech has provided 2  
10           developmental formulations, which we extruded and  
11           e-beamed."  Then you recommended that you put the  
12           project on hold and do no further work evaluating  
13           samples.

14                   I'm interested here in the second paragraph,  
15           "Recall, this work was initiated following OIT  
16           testing of our current Terra Cotta colorant and  
17           JANA Lab's comments concerning its low OIT values  
18           and the relationship to chlorine resistance."

19                   So were you sort of overruled here in your  
20           recommendation to put off the terra cotta  
21           reformulation?

22       A    Quite honestly, I don't recall any of this work so  
23           I can't comment if I was overruled or how this work  
24           initiated.

25       Q    But regardless, the reformulation project was

1 initiated?

2 A Yes.

3 Q So there it states that JANA Labs provided comments  
4 regarding the terra cotta products concerning low  
5 OIT values and the relationship to chlorine  
6 resistance.

7 Do you have an understanding as to what that  
8 relationship was?

9 MR. KUHLMAN: Object to form.

10 A No, sir, I do not.

11 BY MR. SHAMBERG:

12 Q And earlier you had said that the terra cotta  
13 tubing has always passed third-party certification  
14 testing requirements. Right?

15 A Yes, sir.

16 Q So that next sentence it goes on, Our concerns were  
17 magnified by field failures of terra cotta tubing  
18 produced prior to formulation adjustments made by  
19 CPI (circa 2004 to '05) to improve chlorine  
20 resistance and OIT data showing little to no  
21 difference in before and after samples.

22 So as of the date of this email in August of  
23 2008, you were aware that field failures were  
24 occurring with respect to the terra cotta PEX  
25 tubing?

1 A Yes, sir.

2 Q These form -- then you refer to these formulation  
3 adjustments made by CPI to improve chlorine  
4 resistance.

5 Do you have any knowledge as to what those  
6 formulation adjustments were?

7 A I don't recall them, no.

8 Q Do you know who would be most knowledgeable about  
9 those formulation adjustments?

10 A No, I don't.

11 Q When you say that these adjustments were made to  
12 improve chlorine resistance in OIT data showing  
13 little to no difference in before and after  
14 samples, that "before and after samples," it's  
15 referring to before and after what?

16 MR. KUHLMAN: Object to form.

17 A That I don't know.

18 BY MR. SHAMBERG:

19 Q You wrote this email. Right?

20 A Yes, sir.

21 Q Would you have known what meant at the time?

22 A At the time, yes.

23 Q Could this mean, in your mind, that the OIT data  
24 shows little to no difference before and after  
25 those formulation adjustments were made by CPI?

1 A As I stated, I have no idea what that means.

2 Q Okay. Why did you recommend to put the project on  
3 hold?

4 A Because if you read the very next statement, okay,  
5 as we progressed in our study of stability, OIT,  
6 okay, it became very apparent that there was no  
7 relationship, okay, that our data showed or that  
8 studies showed that there was a correlation between  
9 OIT and the chlorine resistance requirement of 876.  
10 And so although I have got data that says, hey, my  
11 terra cotta at that time has extremely low OIT, my  
12 chlorine resistance data, which is the requirement  
13 of the standard, shows it to be acceptable. And I  
14 have got a red product that shows the same thing,  
15 okay. So data is beginning to come back in and  
16 say, hey, there is no correlation between those two  
17 datasets even though they're measuring stability of  
18 the product.

19 And if you take that one step further, okay,  
20 go and read the test method for OIT and they say it  
21 is strictly a quality control test, okay. It has  
22 no validity in predicting or has -- validity is a  
23 good word, validity in predicting long-term  
24 performance of products, okay. It is strictly a --  
25 at this point in time, this is what the stability

1 of the product is. I mean, that's its sole  
2 function. So begin to take those -- all those  
3 pieces of data, begin to question, okay, what value  
4 is OIT testing bringing to the table, what is it  
5 telling us? And my conclusion was rapidly becoming  
6 not very much when I look at -- my concern isn't  
7 what is the stability of the product today and how  
8 does it relate to long-term performance of the  
9 product. My concern is long-term performance of  
10 the product. And everything I saw said, hey, we're  
11 there, we have got product that meets the  
12 requirements -- that meets the standards and that  
13 testing isn't done by NIBCO. That is done by a  
14 third party.

15 Q Okay. That was a very comprehensive answer. So  
16 basically you're saying that there wasn't a need  
17 for reformulation because terra cotta tubing was  
18 meeting the applicable standard?

19 A Yes, sir.

20 Q You said that your concern is with the longevity  
21 and performance of the tubing?

22 A Yes, sir.

23 Q There was no reformulation at this time, it was  
24 determined that you would not reformulate the terra  
25 cotta product?

1       A     Well, apparently there was some reformulation but  
2             that gets back to my comment or suggestion, okay,  
3             that we put this project on hold.

4       Q     Let me go up then to the top email for a moment to  
5             Larry Smallwood.

6       A     Uh-huh.

7       Q     You say, "Larry, We are Killing the terra cotta  
8             reformulation project at this time."

9             Did that, in fact, occur?

10      A     I have to take that statement as it's written so  
11             sounds like, yes, that did happen.

12      Q     Do you recall the terra cotta -- NIBCO developing a  
13             new terra cotta product in 2008?

14      A     No, sir, I do not.

15      Q     What did you do to address these field failures  
16             that you had identified with the terra cotta  
17             tubing?

18      A     At this time -- I'm not sure I understand the  
19             question. Could you rephrase that, please?

20      Q     Well, let's start here. What did you do to try to  
21             understand the failure mechanisms that were  
22             involved with the terra cotta tubing in the field  
23             at this time?

24                         MR. KUHLMAN: Object to form.

25

1 BY MR. SHAMBERG:

2 Q If anything.

3 A I think -- I don't recall any specific actions that  
4 we took or that I took at that time.

5 Q Were you concerned about the field failures?

6 A Of course.

7 Q But you didn't do anything?

8 A I don't recall what I did.

9 Q Okay. But it may have been something, it may have  
10 been nothing?

11 A May have been, yes.

12 Q Is it possible for PEX pipe to fail in the field  
13 even if it meets third-party certification  
14 standards?

15 A Yes.

16 Q Okay. So meeting those third-party standards don't  
17 guar -- doesn't guarantee that the product is gonna  
18 perform -- strike that.

19 Meeting those third-party certification  
20 standards doesn't mean that the product won't fail  
21 in the field?

22 A Yes, that's correct.

23 Q So even if this terra cotta product was meeting the  
24 standards the history -- this document suggests  
25 that they were nevertheless failing in the field.

1 Correct?

2 MR. KUHLMAN: Object to form.

3 A Yes.

4 BY MR. SHAMBERG:

5 Q Does that bother you?

6 A It causes questions. Does it bother me? No.

7 Q The field failures don't bother you?

8 A Huh?

9 Q The field failures don't bother you?

10 A As I stated, it causes me to question why, okay.  
11 Does it concern me? No. I mean, I have got the  
12 product, the standards are written to a particular  
13 performance in a normal installation okay. If I  
14 have got an instance where I've got a cluster of  
15 complaints that's localized, okay, suggesting --  
16 okay, 'cause that same product is performing  
17 acceptably in the rest of the country. Why is it  
18 failing in Charlotte? Okay. There is something  
19 about Charlotte that's different. Okay, we need to  
20 understand what's different about that.

21 Q Is -- I didn't mean to cut you off.

22 A No.

23 Q Is Mobile, Alabama also different?

24 A I don't have any knowledge about Mobile, okay, so I  
25 can't really comment on that.

1 Q What about Texas, do you know if any areas of Texas  
2 are different?

3 A There is something about San Antonio that appears  
4 to be different.

5 Q Las Vegas, is there something about Las Vegas?

6 A Apparently. I don't have any information on that.  
7 But based on the experience that's been reported  
8 regarding Zurn sounds like there is something about  
9 Las Vegas that we need to understand.

10 Q What about North Carolina? Are you aware of any  
11 issues with North Carolina?

12 MR. KUHLMAN: Object to form.

13 A How do you differentiate between North Carolina and  
14 Charlotte?

15 BY MR. SHAMBERG:

16 Q Outside of Charlotte.

17 A Not aware of any instances -- any problems outside  
18 Charlotte.

19 Q Okay. Okay. I want to ask you, you mentioned  
20 earlier PERs?

21 A Yes, sir.

22 Q What is a PER?

23 A Product evaluation request.

24 Q Okay. And --

25 MR. KUHLMAN: I'm sorry. It sounds

1                   like we are going into a new line of  
2                   questioning, I was wondering if we might  
3                   be at a good time for a two- or  
4                   three-minute break?

5                   MR. SHAMBERG: Yes, that's fine,  
6                   that's fine, we can go off.

7                   (A short break was held.)

8 BY MR. SHAMBERG:

9       Q    When we left off I was asking you a little bit  
10           about PERs and I had asked what -- why is a PER  
11           created?

12    A    It is -- the ones I have seen are created, they are  
13           a mechanism for identifying tracing, testing of  
14           field return -- product that comes back from the  
15           field that a customer has had an issue with.

16    Q    Okay. So can you kind of walk me through the  
17           process, to your knowledge, of how -- how -- you  
18           know, start at step one.

19                   How does the PER process work?

20    A    That I have very -- no knowledge of. Okay. I get  
21           involved only with PER to the extent that there is  
22           something unique that the lab technicians over in  
23           the Dare lab have observed and they will come over  
24           and ask me to take a look. And at that time I will  
25           do whatever evaluation or examination that I'm

1           allowed to do or that I feel is appropriate, write  
2           up my comments and, once again, that's sent back to  
3           Scott Perry and Ken McCoy. The complete format or  
4           process of generating and following and tracking a  
5           PER, I don't have any knowledge of.

6       Q     Okay. Would Ken McCoy know about that process?

7       A     Yes, sir.

8       Q     In your understanding what's the purpose of  
9           tracking PERs?

10      A     To help us identify potential problems, okay, with  
11           the long-term goal of improving our products.

12      Q     Is anyone at NIBCO responsible for analyzing the  
13           PERs to determine whether there are common trends  
14           in the failures that are coming in?

15      A     That I don't know.

16      Q     That's not your role?

17      A     No, sir.

18      Q     And you're not aware of anyone who specifically  
19           does that at NIBCO?

20      A     No, sir.

21      Q     Should NIBCO do that?

22                               MR. KUHLMAN: Object to form.

23      A     I would think common sense would say so, yes.

24   BY MR. SHAMBERG:

25      Q     And do you think if that kind of analysis of

1 incoming PERs were conducted you should be involved  
2 in that process?

3 A Not necessarily.

4 Q Why wouldn't you need to be involved?

5 A Because there are other factors besides, okay, what  
6 my area of expertise needs to go into that type of  
7 decision, okay. Maybe I'm not -- don't have the  
8 experience or the knowledge to comment or make  
9 judgments on those other factors.

10 Q Okay. Let's be more specific, more specific.  
11 You're the product engineer for NIBCO PEX tubing.  
12 Right?

13 A Yes, sir.

14 Q So if there were a trend, say, of NIBCO terra cotta  
15 PEX tubing having oxidative type failures in the  
16 field, would that be the kind of, let's say, PER  
17 trend that you would think you should be involved  
18 with --

19 A Yes, sir.

20 Q -- were an analysis to occur?

21 MR. KUHLMAN: Object to form.

22 A Yes, sir.

23 BY MR. SHAMBERG:

24 Q Okay. Did that kind of analysis with respect to  
25 PEX tubing ever occur?

1 MR. KUHLMAN: Object to form.

2 A Yes, I believe so.

3 BY MR. SHAMBERG:

4 Q When did that occur?

5 A That would have been prior to our reformulation  
6 project.

7 Q So before 2009?

8 A Yes, sir.

9 Q What did that analysis entail?

10 A That I don't know.

11 Q But you know that it occurred?

12 A No, I don't.

13 Q So you're speculating that it may have occurred?

14 A It may have occurred.

15 Q What are you basing that speculation on?

16 A That's basically just my opinion.

17 Q Sort of anything's possible in the world?

18 A Yes.

19 Q When you become involved in that process and create  
20 a failure analysis or perform a failure analysis,  
21 is your analysis shared with the customer?

22 A That I do not know.

23 Q You don't make that determination?

24 A No, sir.

25 Q Are you ever informed as to whether your analysis

1 will be shared with the customer?

2 A No, sir.

3 Q Are you aware of any particular instances where  
4 your analysis was shared with the customer?

5 A No, sir.

6 Q Why would NIBCO not want to share the analysis with  
7 the customer?

8 MR. KUHLMAN: Object to form.

9 A That I don't know.

10 BY MR. SHAMBERG:

11 Q Are you at all familiar with the plaintiffs in this  
12 particular case?

13 A No, sir.

14 Q Have you studied any of their tubing or fittings  
15 that have failed?

16 A Not to my recollection.

17 Q Have you been involved in discussions at NIBCO  
18 regarding the products that are at issue in this  
19 case, the plaintiffs' products in this case?

20 MR. KUHLMAN: Object to form.

21 A Not knowing specifically what products are  
22 involved, no, I can't comment, don't know.

23 BY MR. SHAMBERG:

24 Q So you're not even sure what products are  
25 specifically at issue in the case?

1 A That's correct.

2 Q Have you read the complaint?

3 A No, sir.

4 Q Reviewed any documents relevant to this case at

5 all?

6 A No, sir.

7 Q Okay. So you mentioned the reformulation of the

8 product. Did that -- that process began in around

9 2009; is that accurate?

10 A Yes, sir.

11 Q And how long did that reformulation project take to

12 complete?

13 A Three years.

14 Q Three years. So in about 2012 it was completed?

15 A Yes, sir.

16 Q That was -- the tubing to that point had been rated

17 as 1006. And then the rating for the reformulation

18 that was 3308. Correct?

19 A Yes, sir.

20 Q Were you involved in that reformulation project?

21 A Yes, sir.

22 Q How were you involved?

23 A I was technical formulation representative for

24 NIBCO. I interacted with the folks at JANA in

25 developing the formulation.

1 Q Okay. And what -- what considerations went into  
2 the new formulation?

3 A Well, we were looking at a variety. I mean, you're  
4 looking at extrusion processing conditions, okay,  
5 we are looking at how the product e-beamed. We are  
6 looking at the conformance to 876 requirements,  
7 looking at weatherability, looking at chlorine  
8 resistance. Those are the ones that come to mind  
9 right now.

10 Q Why did NIBCO undertake the reformulation project?

11 A Because the industry was moving towards the higher  
12 end products, the products having higher numbers  
13 for their chlorine resistance.

14 Q Okay. So it was to essentially create a  
15 competitive -- more competitive product?

16 A Yes, sir.

17 Q And that's because the customers were looking for  
18 products that had higher chlorine ratings?

19 A The customers -- I can't say what the customers  
20 were looking for.

21 Q Well, didn't you say the reformulation project was  
22 intended to create a new product that would be  
23 competitive with other products?

24 A Yes.

25 Q In other words, to give the customer what they were

1 asking for?

2 A Yes.

3 Q So what was the customer asking for?

4 A My understanding they were looking for higher  
5 numbers.

6 Q Higher numbers, okay. It's your understanding.  
7 How did you gain that understanding?

8 A Just in general, I don't know that the customers,  
9 end users have a good understanding what the 5 --  
10 1, 3, 5 mean.

11 Q They don't have a good understanding?

12 A Yes.

13 Q But yet you said they were still asking for a  
14 higher number?

15 A Yes. They figure 5 is larger than 3, 3 larger than  
16 1, that has to be better.

17 Q Okay. How did you -- what leads you to believe  
18 that the customers were saying, you know, I want a  
19 5 instead of a 3 or 3 instead of --

20 A Just the way it came in, okay, you would get those  
21 comments, okay, I need a 5, okay, I need a 3, those  
22 type of comments, okay. It wasn't any better  
23 chlorine resistance or I need better performance it  
24 was always I need a higher number.

25 Q Okay. Who are NIBCO's biggest customers for PEX

1 tubing and -- well, let me clarify that. Not in  
2 terms of specific entities but just is it the end  
3 user -- are end users the biggest customers for  
4 NIBCO?

5 MR. KUHLMAN: Object to form.

6 A Help me understand what you mean by "end users."

7 BY MR. SHAMBERG:

8 Q Let me try to ask it a different way. Are  
9 NIBCO's -- are the majority of the NIBCO's  
10 customers plumbers or plumbing outfits?

11 A No.

12 Q Okay. Describe for me the types of entities that  
13 make up the majority of NIBCO's PEX tubing sales?

14 A For us there are two major outlets, okay. One is  
15 retail, okay, places like Home Depot, Lowe's,  
16 Menards, Ace Hardware. The other are -- not the  
17 plumbers but the step above, okay, contractors, if  
18 you will, or distribution centers.

19 Q Okay. So the retailers, Menards, Home Depot, those  
20 kind of places, to your knowledge were they coming  
21 to NIBCO and saying we want a higher number on the  
22 pipe?

23 A No.

24 Q The distributors, were they coming to NIBCO and  
25 saying we want a higher number on the pipe?

1 A It was more likely the request was coming from the  
2 distributors.

3 Q Was more likely. Are you aware of an instance  
4 where a distributor came to NIBCO and said I want a  
5 higher number?

6 A Specifically, no.

7 Q And you testified earlier, I think, that plumbers  
8 wouldn't know what these numbers signify?

9 MR. KUHLMAN: Object to form.

10 Misstates prior testimony.

11 A I don't know that they don't know what it means.  
12 I'm not sure they understand what it means.

13 BY MR. SHAMBERG:

14 Q Would the distributors who are coming to NIBCO and  
15 saying I want a higher number, would they  
16 understand what the numbers signify?

17 A Not necessarily, no.

18 Q Okay. And let me just reask the question.  
19 Would -- in your experience, would plumbers know  
20 what those numbers signify?

21 A Most cases I don't believe so.

22 Q Okay. Do you believe that the end users, say, you  
23 know, a family in a home in a residential plumbing  
24 application, would that family understand what  
25 those numbers signify?

1 A It's unlikely.

2 Q So who in this chain of distribution is saying I  
3 need to have a higher number?

4 A I -- it's probably an internal decision, okay, made  
5 to a -- react to what we were seeing from our  
6 competitors.

7 Q Okay. So it's kind of a me, too, they were getting  
8 better ratings and you wanted to get the better  
9 rating, too?

10 A Yes, sir.

11 Q But there weren't -- it wasn't necessarily  
12 customers coming to NIBCO and saying we need to  
13 have a higher rating?

14 A No, sir.

15 Q Did you -- did you an involvement in selecting the  
16 resin for the reformulation project?

17 A Yes, sir.

18 Q What was your role in that decision?

19 A Once again, helping identify primarily the  
20 processing characteristics of that resin.

21 Q Okay. Describe for me what process and  
22 characteristics were developed.

23 A First of all, we extrude the product and make good  
24 tubing out of it. And then, okay, in the active  
25 extrusion what other -- are there other

1           considerations, okay, that would affect our ability  
2           to make that product and produce it.

3       Q   For the 1006 tubing, were you using -- was NIBCO  
4           using a resin provided by Total?

5       A   Yes, sir.

6       Q   Is that the CD4300 resin?

7       A   Yes, sir.

8       Q   To your knowledge is that the only resin that NIBCO  
9           used to manufacture the 1006 tubing?

10      A   Yes, sir.

11      Q   And did you continue to use that resin in the 3308  
12          tubing?

13      A   No, sir.

14      Q   Which resin did you use in the 3308?

15      A   We ultimately ended up using a Dow resin.

16      Q   Do you what the name would be of that resin?

17      A   It's DGDB 2480.

18      Q   The Total CD4300 resin that was in the 1006, is  
19          that a pipe grade resin?

20      A   That I do not know.

21      Q   Do you know what it means -- what pipe grade resin  
22          means?

23      A   Yes.

24      Q   Just not sure if that one --

25      A   I'm not sure.

1 Q -- fits that description? So why don't we say what  
2 is -- what would a pipe grade resin be, what does  
3 that mean?

4 A Pipe grade resin is a class of resins that have  
5 undergone specific tests, okay, and primarily  
6 hydrostatic -- long-term hydrostatic type tests and  
7 they have been developed, okay, to have that  
8 long-time performance, okay, and they are typically  
9 identified or shown by performance numbers  
10 developed by PPI.

11 Q Plastic Piping Institute?

12 A Plastic Pipe Institute.

13 Q Plastic Pipe Institute, okay. And so a resin that  
14 is not -- don't know if certified is the right  
15 word but a resin that's not given the  
16 classification of pipe grade by the PPI wouldn't  
17 have undergone that battery of tests you were just  
18 describing?

19 MR. KUHLMAN: Object to form.

20 A Not sure.

21 BY MR. SHAMBERG:

22 Q It may have undergone those tests?

23 A Yes, sir.

24 Q And if it's not deemed pipe grade would that  
25 indicate to you that it didn't pass the test?

1 A No, sir.

2 Q Would there be a reason that a resin supplier or  
3 manufacturer would submit a resin for pipe grade  
4 testing, pass the test and then determine not to  
5 label the product as pipe grade?

6 A Yes, sir.

7 Q Okay. Why would that be?

8 A Depends on what their target market is, okay. If  
9 you're developing a resin, okay, specifically for  
10 extruded profiles or for Lomodine or what have you  
11 and the marketing people come back and say, well, I  
12 don't really need the pipe grade material, okay,  
13 you may have already tested it, okay, you just may  
14 not promote that information in your technical  
15 literature or have your people tell your  
16 salespeople that, hey, this is a great resin, you  
17 ought to be taking it to your pipe people if you  
18 got other rates that meet their criteria.

19 Q Okay. And you're just -- you testified you're not  
20 sure whether the Total CD4300 was a pipe grade  
21 resin?

22 A It's not listed as a pipe grade resin.

23 Q Why did you need to change the resin for the 3308?

24 MR. KUHLMAN: Object to form.

25 A One of the areas that we identified as important,

1           okay, because as we are looking -- one of the areas  
2           we identify is important to us in reformulation  
3           because oxidative attack failure is a slow crack  
4           growth phenomenon. Okay, we've identified what is  
5           called a pen value, which measures slow crack --  
6           slow crack growth, okay. It's a test specifically  
7           for that characteristic and we identified criteria  
8           that we felt were necessary for us to obtain the  
9           improved chlorine resistance.

10       Q    Okay. So improving chlorine resistance did play  
11           into the selection of the new resin?

12       A    Yes, sir.

13       Q    And you made -- did you make the conclusion that  
14           the Dow resin that was ultimately used in the 3308  
15           provided better chlorine resistance than the Total  
16           resin in the 1006?

17       A    Ultimately, yes.

18       Q    What led you to make that conclusion?

19       A    The results of the SF 23 testing.

20       Q    Was improving chlorine resistance a motivating  
21           factor generally in the reformulation project?

22                               MR. KUHLMAN: Object to form.

23       A    That was one factor, yes, sir.

24       BY MR. SHAMBERG:

25       Q    And you mentioned earlier the desire to be

1 competitive with other manufacturers' products.

2 Right?

3 A Yes, sir.

4 Q Were there any other factors that played into it?

5 A No, not that I'm aware of.

6 Q Okay. So as part of the reformulation project, did  
7 NIBCO work with any outside entities?

8 A Yes. We worked with JANA Labs.

9 Q Were you -- I think you stated you were involved in  
10 the communications with JANA Labs --

11 A Yes, sir.

12 Q -- regarding the reformulation project?

13 A Yes, sir.

14 Q Who did you primarily communicate with at JANA?

15 A It would be Ken Oliphant and Sarah Chung.

16 Q While the reformulation project was under way, was  
17 NIBCO also attempting to maintain its certification  
18 for the 1006 pipe?

19 A Yes, sir.

20 Q And that was to ensure that there was a certified  
21 pipe for sale up until the 3308 could be put to  
22 market. Correct?

23 A Yes, sir.

24 Q Did you ever communicate with someone named Aleesha  
25 Valentine at JANA?

1 A During the projects there were numerous conference  
2 calls and Aleesha would sit in on some of those  
3 conference calls. Did I have personal  
4 communication with Aleesha? Not that I recall.

5 Q Just aside from the conference calls?

6 A Yes.

7 Q You never met her in person?

8 A No.

9 Q And you don't recall having email exchanges with  
10 her directly?

11 A No, sir I, don't.

12 Q I actually want to ask you about maybe one of those  
13 calls that were involved in that project.

14 (Exhibit 23 was marked for identification.)

15 A Okay.

16 BY MR. SHAMBERG:

17 Q Okay. So there is a couple emails here. The  
18 bottom of the page there is an email from Aleesha  
19 Valentine to you, Mark Clark and bobod@NIBCO.com.  
20 Is that David Bobo?

21 A Yes.

22 Q What -- at -- at the time of this email what would  
23 Mr. Bobo's job title have been?

24 A He was project manager for this project, the  
25 reformulation.

1 Q So Aleesha writes to the three of you, Dave, Mark  
2 and Earl, "Happy Monday. Hope you guys had a  
3 wonderful weekend. I'm attaching a document that  
4 details the history of CPI/NIBCO's certifications,  
5 the current status of your certifications, our  
6 proposed path forward, and guidance for talking to  
7 NSF and IAPMO." And then the sentence after next  
8 she says, "I'd like to schedule a conference call  
9 with the three of you once you've had chance to  
10 review this document." So then if we look up at  
11 the next email in this chain from Aleesha it looks  
12 like two days later and she is writing to David  
13 Bobo and says, "Hi Dave, The updated document is  
14 attached per our phone conference yesterday  
15 afternoon."

16 Do you have a recollection of being involved  
17 in that phone conference that she is referring to?

18 MR. KUHLMAN: Object to form.

19 A No, sir, I don't.

20 BY MR. SHAMBERG:

21 Q Do you know for a fact that you weren't on that  
22 call or do you just not remember?

23 A I just don't remember.

24 Q It's possible you were on the call just not sure at  
25 this point?

1 A That's correct.

2 Q This document would seem to indicate Aleesha is at  
3 least asking that the conference call involve all  
4 three of you. Right?

5 A Yes.

6 (Exhibit 24 was marked for identification.)

7 A Okay, sir.

8 BY MR. SHAMBERG:

9 Q Okay. So this is a document that I know you have  
10 testified about before. Do you remember when you  
11 first saw this document?

12 A My best recollection it was, I believe, part of the  
13 Pulte deposition.

14 Q Okay. You don't have a recollection of seeing the  
15 document before that deposition?

16 A No, sir, I don't.

17 Q Okay. If you look at the bottom, say, of the first  
18 page in the middle there is a date on there?

19 A Yes, sir.

20 Q March 30th, 2009, and is that the same date as the  
21 email we were just discussing from Aleesha to you,  
22 David Bobo and Mark Clark?

23 A Yes, sir.

24 Q So does that lead you to believe that this is the  
25 document that she's referring to that was attached

1 to the email?

2 A Yes, it does.

3 Q You think you just didn't read it at that time?

4 A I just don't recall it.

5 Q Do you feel that -- strike that.

6 Okay. Let's talk about this document. It  
7 begins with the history of NIBCO certifications and  
8 discusses past third-party certification efforts  
9 and test results. And in the first -- second full  
10 paragraph here it says, a full chlorine resistance  
11 dataset was run on the terra cotta pipe using  
12 Equistar resin in August of 2004. The terra cotta  
13 pipe met the minimum lifetime requirement of ASTM  
14 F876 at 50.3 years.

15 What is the minimum lifetime requirement of  
16 ASTM F876?

17 A 50 years.

18 Q Then next paragraph it says a full chlorine  
19 resistance dataset was run on the terra cotta pipe  
20 using Total resin in May 2005. Do you see that?

21 A Yes, sir.

22 Q That Total was the supplier for the resin that was  
23 used in the PEX tubing that NIBCO manufactured,  
24 correct, the 1006 tubing?

25 A Yes, sir.

1 Q It says that the terra cotta blue and white pipes  
2 met the -- met the minimum lifetime requirement.  
3 The orange and red pipes failed to meet the 50-year  
4 lifetime requirement failing at 47 and 44 years  
5 respectively.

6 MR. KUHLMAN: Object to form.

7 MR. SHAMBERG: That wasn't a  
8 question.

9 MR. KUHLMAN: I wasn't sure, there  
10 was a pause.

11 BY MR. SHAMBERG:

12 Q So if you hadn't seen this memo, were you aware at  
13 the time that this memo was written that the orange  
14 and red pipes had failed to meet the minimum  
15 lifetime requirement of ASTM F876 when tested in  
16 May of 2005 with the Total resin?

17 MR. KUHLMAN: Object to form.

18 A Yes.

19 BY MR. SHAMBERG:

20 Q Do you recall when you first became aware of that  
21 fact?

22 A I believe shortly before this, probably somewhere  
23 in 2008, I believe.

24 Q Okay. How did you become aware of that fact in  
25 2008?

1       A     I went back and basically did exactly what Aleesha  
2             or JANA or whoever wrote this document did, looked  
3             at past reports that CPI had given us.

4       Q     Okay. What was the impetus for you looking at  
5             those reports at that time?

6       A     That I don't recall.

7       Q     When you looked at the reports and saw those  
8             results, what, if anything, did you do?

9       A     That I don't recall either.

10      Q     Do you remember being concerned about the results?

11      A     We had questions -- or I had questions, okay, about  
12             those results. Because if you look at the test  
13             data, okay, the test data shows the extrapolated  
14             times to failure were longer than what the three  
15             approvals that we had, terra cotta, white and blue.  
16             And so we were wondering, okay, why, if the data is  
17             better, those products did not pass. So there were  
18             questions about that.

19      Q     Okay. What was the conclusion?

20      A     Huh?

21      Q     What did you conclude?

22      A     That the results that we were getting were because  
23             of the mathematical calculations. Because,  
24             remember, this is an extrapolated test, okay,  
25             you're not testing out for a full 50 years. You're

1 testing for a limited time then extrapolating that  
2 data. And it was the requirements that were put on  
3 that extrapolation that was causing the labs  
4 running the test to disregard certain data points.  
5 Q Okay. Who -- who created the -- that extrapolation  
6 method?  
7 A That I don't know.  
8 Q Okay. It wasn't NIBCO?  
9 A No.  
10 Q It was -- could it have been JANA?  
11 A Could have been.  
12 Q JANA was also conducting the test. Correct?  
13 A Yes.  
14 Q Is there any other entity that, in your mind, might  
15 have created that extrapolation?  
16 A Yes, there is.  
17 Q What entity or entities?  
18 A Each of the test listing agencies, okay, have their  
19 own criteria how they handle data. It could have  
20 been UL, could have been NSF, could have been  
21 IAMPO, I-A-M-P-O.  
22 Q I-A-P-M-O.  
23 A Any of those agencies have the freedom to interpret  
24 that data as they see fit it. It could have come  
25 from PPI or PPFA, okay, they could have written,

1           okay, the compilation criteria for that.

2       Q     So this is, obviously, an important test?

3       A     Yes.

4       Q     Because it -- would NIBCO sell pipe that didn't  
5           meet third-party certification standards?

6       A     That's correct, we would not.

7       Q     So in order to have a market for the pipe, you need  
8           to meet these minimum lifetime requirements in ASTM  
9           F876?

10      A     Yes.

11      Q     And the -- whether or not the pipe passes that test  
12           is determined, in part, by this mathematical  
13           extrapolation. Correct?

14      A     Yes, sir.

15      Q     But you don't know who developed that  
16           extrapolation?

17      A     That's correct.

18      Q     How did you learn about it? How did you first  
19           become aware of this extrapolation test?

20      A     That is written into the 2023 test method.

21      Q     Okay. Have you ever actually performed those  
22           calculations yourself?

23      A     No, sir, I have not.

24      Q     Would you be able to do that?

25      A     I can't answer that not knowing, okay -- not having

1 done it.

2 Q Okay. That's what I mean, just sitting here today  
3 if I gave you --

4 A No.

5 Q -- some data would you be able to do it?

6 A No, sir.

7 Q When these tests are run to determine the  
8 extrapolated lifetime, the numbers that you get,  
9 whether it's 50.3 or 78 years, whatever it may be  
10 that's an average of different data points.  
11 Correct? Let me strike that.

12 The number that you get, the 78 years, the 50  
13 years, that's an average of tests on different  
14 samples. Correct?

15 MR. KUHLMAN: Object to form.

16 A No.

17 BY MR. SHAMBERG:

18 Q Okay. So is it just one sample you run through the  
19 test and then you get the years extrapolation to  
20 failure and that's it?

21 A No, sir.

22 Q How does it work?

23 A You have a different formulation, okay, and you run  
24 a whole series of tests, okay. In fact, the  
25 requirements, I think, are for 15 separate tests.

1 And you're testing a variety of combinations  
2 involving high pressures and elevated temperatures  
3 to accelerate the -- accelerate the failure, okay,  
4 'cause it is a test to failure. So you have got  
5 things such as high pressure, high temperature,  
6 then low temperature, low pressure. Then -- the  
7 entire test methods cover all combinations so that  
8 you have 15 data points. You take those 15 data  
9 points and you develop the lifetime curve, okay,  
10 which will end at the end of your testing, okay,  
11 which is typically anywhere from 24 to probably 48  
12 months. You extrapolate that time or that curve  
13 out to where it intersects the minimum stress  
14 requirements for PEX tubing out to 15 or where does  
15 that intersect. And that gives you the time or  
16 extrapolated time to failure, that extrapolation.

17 Q Okay. But, again, that's not -- JANA would have  
18 conducted the math -- the math for that  
19 extrapolation in this instance. Correct?

20 A Yes, sir.

21 Q If we turn to the second page of this document it  
22 says -- it's gonna be the second line of Page 2 of  
23 4 of the document, says, "The orange and red pipes  
24 were awarded a provisional listing based on an NSF  
25 policy that was in the process of being changed."

1                   What was that NSF policy that was being  
2                   changed?

3       A     That I have no knowledge of.

4       Q     Okay. Do you know what a provisional listing is?

5       A     No, I don't. I mean, I have never heard the phrase  
6                   provisional listing until, as I stated, I saw this  
7                   document about a year ago.

8       Q     Do you now have an understanding of what  
9                   provisional listing is?

10      A     Yes, I do.

11      Q     What is that?

12      A     Provisional is, as I stated, the interpretation of  
13                   the data. At the time that this testing was done,  
14                   the interpretation of the test method and handling  
15                   their data stated that the data points of these  
16                   additional colors had to be within plus or minus  
17                   five percent of the extrapolation curve for the  
18                   master color. Okay? On -- for us on the red and  
19                   the orange, some of those data points were so good  
20                   they were more than five percent better than that  
21                   massive curve. And JANA or NSF, whoever was  
22                   interpreting the data, chose to disregard those.

23                   The provisional statement or provisional  
24                   criteria said if that happens you can take data at  
25                   points from a similar color and plug them into the

1 formula and recalculate your extrapolated time to  
2 failure. And based upon that they granted us a  
3 listing provisional, the listing on the red and  
4 orange.

5 Q And this document indicates that at some point that  
6 policy changed but you're just not sure how it was  
7 changed, in what way?

8 A I don't know -- first of all, I don't know if it  
9 ever changed, if it did when or what was involved.

10 Q So you mentioned the plus or minus five percent and  
11 that the data points would need to be within that  
12 plus or minus five percent to be considered for the  
13 extrapolation?

14 A Yes, sir.

15 Q Do you know what an outlier is?

16 A Yes, sir.

17 Q What is an outlier?

18 A Outlier follows the data point that does not follow  
19 the trend and so far different from the trend that  
20 you judge it to be non-acceptable or maybe a false  
21 reading, if you will.

22 Q So when the requirement for the testing method  
23 involves this plus or minus five percent, would  
24 that be to eliminate outlying data points?

25 A Yes, it would.

1 Q Is that a sound scientific method to not consider  
2 outliers?

3 A Yes, sir.

4 Q But you're saying if those outliers had been  
5 considered, then the red and orange would have  
6 passed the test?

7 A Yes, sir.

8 Q Okay. So then continuing on in this same paragraph  
9 we were just discussing at the top of Page 2,  
10 discussing the process being changed, it says,  
11 "This change meant that red or orange pipes  
12 selected for Chlorine Resistance testing in Year 3  
13 of certification (2008) would likely have similar  
14 results to the initial DLT testing and result in  
15 NSF withdrawing the listing of the affected  
16 products."

17 So in this here Aleesha is expressing a  
18 concern that if the red and orange pipe are  
19 retested by NSF then NSF could withdraw the  
20 listing because they would fail the test. Right?

21 A Yes, sir.

22 Q And then if we go down to the last full paragraph  
23 under the "Current Status" section here it starts,  
24 "Today, NIBCO maintains," the second to last  
25 sentence Aleesha says, "Because the red pipe failed

1 to meet the minium lifetime requirement of 50 years  
2 when tested in 2005, we must be cautious if red  
3 pipe is selected by the NSF auditor." And then  
4 again, "If the pipe fails the DLT testing, NIBCO'S  
5 certification of its red pipe is in danger of being  
6 withdrawn."

7 When you first became aware of the -- the red  
8 and orange pipe having failed these tests you said  
9 that was in around 2008 when you gained that  
10 awareness?

11 MR. KUHLMAN: Object to form.

12 A Yes.

13 BY MR. SHAMBERG:

14 Q Did that give you any concern about future testing  
15 of the red and orange pipe for third-party  
16 certification?

17 A I don't recall any concern.

18 Q Were you concerned that the failure to meet the  
19 minimum lifetime requirements could lead to  
20 failures in the field?

21 A No, sir.

22 Q Why not?

23 A Because, as I stated, when I started looking at the  
24 actual test data, the test data suggested it was  
25 better than what I had my -- the terra cotta color,

1 which is what the independent test data was.

2 Q You were taking into account the outliers?

3 A Well, all the trends. I mean, when do you judge a  
4 sample or data point to be an outlier? I mean,  
5 there are certain criteria that you can use. But  
6 if I have got five or six data points, all of them  
7 are above the baseline and one happens to be just a  
8 little bit further outside that baseline, okay, to  
9 me that's not an outlier.

10 Q But to whomever developed that test procedure and  
11 extrapolation it was. Right?

12 A Yes.

13 MR. KUHLMAN: Object to form.

14 BY MR. SHAMBERG:

15 Q Then continuing from this page onto the next page  
16 there is a section "Path Forward" and there are a  
17 number of different options laid out, seven  
18 different options. And I want to ask you about  
19 option three. Option three, "When the NSF auditor  
20 collects a sample from NIBCO, NIBCO should  
21 immediately send an identical sample to JANA for  
22 comparison testing. This would allow us to  
23 identify a potential failure early and advise NSF  
24 to stop their testing."

25 Do you know whether pipe was ultimately

1           selected -- NIBCO PEX tubing was ultimately  
2           selected by NSF for audit in 2008 or -- in 2009 or  
3           2010?

4                           MR. KUHLMAN: Object to form.

5       A     Yes.

6       BY MR. SHAMBERG:

7       Q     It was?

8       A     Yes.

9       Q     Okay. Do you recall which color pipe was selected?

10      A     Blue.

11      Q     Do you know how the blue pipe was selected?

12      A     That -- the selection process is at the discretion  
13           of NSF. Now from experience I can tell you that  
14           NSF has a propensity to take blue samples when they  
15           come and do their audits, okay. Because obviously  
16           you're audited every three years and I think every  
17           time they have come in and audited us, okay, they  
18           have taken a blue sample. So maybe they know  
19           something about the performance of blue or whatever  
20           that causes them to select that. But what that  
21           would be, I don't know that.

22      Q     Okay. So to your knowledge NSF has never selected  
23           NIBCO red tubing for sampling?

24      A     Not for audit sampling.

25      Q     To your knowledge NSF has never selected terra

1 cotta tubing for audit?

2 A No, I don't believe so.

3 Q And NSF hasn't selected orange tubing for audit?

4 A We no longer produce orange, that's not --

5 Q When did you stop producing orange?

6 A That I can't recall. It's been several years.

7 Q More than five?

8 A Yes.

9 Q Okay. Okay. Then I want to ask about one other of  
10 these options which is option seven, NIBCO should  
11 keep as little red pipe in storage at the  
12 manufacturing facility as possible. If NSF shows  
13 up to collect a sample and red pipe isn't being  
14 produced that day, there is nothing in the  
15 warehouse and there's nothing for NSF to sample.

16 Do you have any knowledge as to whether NIBCO  
17 altered its pipe storage processes at the Lebanon  
18 facility as a result of this memo?

19 A No, sir, I do not.

20 Q You don't have knowledge?

21 A I don't have knowledge, okay. In hindsight, I  
22 don't think it's a very feasible option in that in  
23 our process we have -- we have to supply our  
24 customers, okay, which means we have to have a  
25 certain amount of inventory on the floor, okay, to

1 meet our supply agreements to those customers. And  
2 so for us to completely eliminate any inventory of  
3 red on the floor or even have a reduced inventory  
4 of red on the floor, to me that doesn't sound very  
5 realistic. But to answer your question, no, I'm  
6 not aware of any actions that were taken to do  
7 that.

8 Q But you also couldn't testify that it did not  
9 happen?

10 A That's correct.

11 Q Okay. So then following that in the memo there is  
12 a few suggestions on how to deal with various  
13 third-party certifications entities, the first one  
14 being IAPMO, which we mentioned earlier. And so  
15 what the memo states, says, "Mark" -- is that  
16 referring to Mark Clark?

17 A I believe so, yes.

18 Q "Mark must call IAPMO to identify requirements for  
19 reinstatement of the listings. It is not unusual  
20 for manufacturers to withdraw certifications and  
21 then reinstate them, so this will not throw up any  
22 flags for IAPMO."

23 Why would there be concerns about throwing up  
24 flags for IAPMO?

25 MR. KUHLMAN: Object to form.

1 A That I can't answer.

2 BY MR. SHAMBERG:

3 Q Okay. Let's think about it some more. The next  
4 paragraph has a note, says, according to my  
5 discussions with Padanaplast, IAPMO will award  
6 certification based on the acceptance of DLT data  
7 from NSF in a specially formatted report. If the  
8 listing cannot merely be reinstated based on the  
9 listings that was withdrawn in 2008, this could  
10 pose a problem as NSF does not have any passing  
11 data on the red pipe. Therefore, NIBCO must press  
12 IAPMO hard for sample reinstatement.

13 So would you say that the flags, at least  
14 according to the memo, that would be thrown up is  
15 that if IAPMO had to do additional certification  
16 testing on the pipe it might not pass the tests?

17 A Once again, I can't answer what her definition of  
18 flags is or what factors she considered.

19 Q What do you understand this to mean?

20 A That's not important, is it? I didn't write this  
21 memo, okay. And as I stated, okay, until a year  
22 ago I didn't know or I didn't recall ever seeing  
23 this memo, okay. So I have very limited knowledge  
24 on what actions were taken as a result of it. So I  
25 don't feel qualified to answer that question.

1 Q This was a memo that was emailed to you in March of  
2 2009. Correct?

3 A I realize that but I don't recall it.

4 Q Do you think as the product engineer for PEX tubing  
5 at that time this is a communication that you  
6 should have been aware of?

7 MR. KUHLMAN: Object to form.

8 A No, sir.

9 BY MR. SHAMBERG:

10 Q This isn't something you need to be aware of?

11 A No, sir.

12 Q Okay. The last thing I want to talk about is on  
13 the final page, Page 4 of 4, the section on how to  
14 deal with NSF. And if you haven't reviewed that  
15 I'd ask that you please do. I don't want to read  
16 the whole thing but I do want to ask you a couple  
17 questions about it.

18 A Okay.

19 Q Okay. So there is a lot of kind of advice given  
20 here as to how Aleesha believes that NIBCO should  
21 deal with NSF. And one specific that I want to ask  
22 you about is in the third paragraph, starts on the  
23 fourth line down. Says avoid mentioning any  
24 changes in resin, but it would be okay to say that  
25 you are working with your master batch supplier if

1           they push it that far.

2                   Why would you need to avoid mentioning changes  
3           in the resin to an NSF auditor?

4                           MR. KUHLMAN: Object to form.

5       A     I'm not aware of any reason.

6       BY MR. SHAMBERG:

7       Q     So if an NSF auditor would have shown up at this  
8           point -- well, strike that.

9                   So let me ask you, generally in this section  
10           on how to deal with NSF, are you aware of NIBCO  
11           enacting any of the suggestions that are made here?

12                           MR. KUHLMAN: Object to form.

13       A     No, sir, I'm not.

14       BY MR. SHAMBERG:

15       Q     Okay. But, again, you don't know that that didn't  
16           happen you're just not aware specifically of --

17       A     I'm not aware.

18       Q     Even though you may not have seen this memo or had  
19           recollection of seeing the memo until your  
20           deposition, in 2009 were you involved in any  
21           discussions about the content of this memo?

22       A     Not that I recall.

23       Q     So as far as know you just completely ignored this  
24           memo and all of its contents in 2009?

25                           MR. KUHLMAN: Object to form.

1       A    I don't know that I ignored, okay. But I --  
2           personally I read through this memo, okay, it's all  
3           dealing with listing issues, okay, of which I  
4           wasn't directly involved with, okay. And this gets  
5           back to my point, okay, should I have been copied  
6           or aware of this memo, okay, maybe as a side light.  
7           But am I going to be directly involved in any of  
8           the recommendations or the actions that come out of  
9           this? No, very limited.

10   BY MR. SHAMBERG:

11       Q    Okay. So as the PEX product engineer the failure  
12           of PEX tubing -- red and orange PEX tubing to meet  
13           the minimum lifetime requirements of ASTM F876  
14           wasn't really of any concern to you?

15                   MR. KUHLMAN: Object to form.

16       A    I did not say that. I said this memo wasn't  
17           because it addresses listing issues and how to deal  
18           with listing agencies. The fact that the red and  
19           orange, okay, showed low numbers, okay, that was of  
20           concern and that was being addressed. That was the  
21           purpose of the reformulation project, to drive  
22           those numbers up.

23   BY MR. SHAMBERG:

24       Q    Okay. So essentially you would say the only NIBCO  
25           employee that should have had an interest in this

1 memo would have been Mark Clark?

2 A No. There is a whole list of other people here,  
3 okay, I believe Mark Clark, Dave Bobo, Dave might  
4 forwarded it on to, looks like, some other  
5 recipients at NIBCO.

6 Q Well Aleesha sent it to you to. Right?

7 A That's correct.

8 Q And you were working with her on the reformulation  
9 project. Right?

10 A Aleesha wasn't directly involved in the  
11 reformulation.

12 Q Was she involved in the product (sic) to maintain  
13 the certification for the 1006 tubing?

14 A I believe so, yes.

15 Q Okay. Did NIBCO -- after the date of this memo,  
16 did NIBCO continue to do business with JANA?

17 A Yes.

18 Q Are you aware, maybe not yourself but are you aware  
19 of anyone at NIBCO reaching out to JANA and saying,  
20 this isn't how we do business here?

21 A No, I'm not aware of that.

22 Q Do you recall anybody from NIBCO reaching out to  
23 JANA and saying we don't hide pipe from our  
24 auditors?

25 A No, sir, I'm not aware of that.

1 Q Do you think someone should have done that?

2 A That I would have thought so but I wasn't -- my  
3 opinion wasn't asked, so.

4 MR. KUHLMAN: Are we getting close  
5 to a lunch stopping point?

6 MR. SHAMBERG: Can we go off for a  
7 second?

8 (A short discussion was held.)

9 BY MR. SHAMBERG:

10 Q So before we continue on, I just want to ask a  
11 couple questions about your previous testimony.  
12 You had stated that at some point more than five  
13 years ago NIBCO stopped producing orange PEX  
14 tubing; is that right?

15 A Yes, sir.

16 Q Why did NIBCO stop producing orange tubing?

17 A Market demand.

18 Q People weren't buying?

19 A People weren't buying it.

20 Q Do you know why that was?

21 A No.

22 Q Do you know if it had anything to do with the  
23 chlorine resistance issues with the orange tubing?

24 A What chlorine resistance issue?

25 Q With the failure of the orange tubing to meet the

1 ASTM F876 requirements for minimum lifetime.

2 A But it did meet requirements, it was listed as  
3 meeting those requirements. The same was true with  
4 the red. Both -- both red and orange, despite what  
5 the numbers say, were listed as meeting and  
6 conforming with 876 requirements including chlorine  
7 resistance.

8 Q Was there a concern within NIBCO that if those red  
9 and orange tubing products were retested they would  
10 fail to meet lifetime requirements?

11 A Not that I'm aware of.

12 Q Would you consider JANA to be a well-respected  
13 laboratory?

14 A Yes, sir.

15 Q Would you say you have confidence in its testing  
16 and test results?

17 A Yes, sir.

18 (Exhibit 25 was marked for identification.)

19 A Okay.

20 BY MR. SHAMBERG:

21 Q So earlier today we were discussing an email chain  
22 from April of 2008 talking about the marginal  
23 performance of the terra cotta PEX tubing with  
24 respect to oxidative induction time. Do you  
25 remember that?

1 A Yes, sir.

2 Q And you had said that at that time you weren't  
3 concerned about that as a potential mechanism for  
4 field failures is that right?

5 A Yes, sir.

6 Q So this document that I have shown you now is a --  
7 looks like a -- it's a called final report that was  
8 issued by JANA with respect to a certain project.  
9 And if you look on the second page of this  
10 document, the date of issue is June 13, 2008.  
11 Correct?

12 A Yes, sir.

13 Q So this is about, you know, within a couple months  
14 of that email chain about the -- about OIT. Right?

15 A Yes, sir.

16 Q And the -- you know, the stated objective of this  
17 project, according to the document, was to  
18 determine the degree of cross-linking and oxidative  
19 induction time of various PEX field failure pipe  
20 samples. Right?

21 A Yes.

22 Q And then sorry to flip back and forth there but  
23 going back to the second page, there is a table,  
24 table one, that shows the JANA sample IDs. And it  
25 looks like it's both white PEX and also terra cotta

1 PEX pipe that's being tested; is that correct?

2 A Yes, sir.

3 Q And then back onto the first page in the final  
4 paragraph of this executive summary, the second  
5 sentence says, "The OIT results suggest that the  
6 inner surfaces of the samples are largely  
7 unprotected by stabilization against oxidative  
8 degradation."

9 A I'm sorry, where are you reading?

10 Q It's the bottom paragraph on this first page.

11 A Okay.

12 Q The second sentence there that starts "The OIT  
13 results."

14 "The OIT results suggest that the inner  
15 surfaces of the samples are largely unprotected by  
16 stabilization against oxidative degradation."  
17 There is more and then it says, "The low level of  
18 stabilizer and the pattern of micro-cracking are  
19 not inconsistent with oxidative attack and suggest,  
20 based on JANA's experience, that the cracking is  
21 occurring at localized weak points or flaws."

22 MR. KUHLMAN: Is there a question?

23 BY MR. SHAMBERG:

24 Q Do you have any reason to doubt the veracity of  
25 JANA's conclusion here?

1 MR. KUHLMAN: Object to form.

2 A No.

3 BY MR. SHAMBERG:

4 Q Do you remember seeing this report when it was  
5 issued or around the time it was issued?

6 A I likely did but I don't recall it specifically.

7 Q Do you still believe that a low level of  
8 stabilization cannot lead to oxidative degradation?

9 MR. KUHLMAN: Object to form.

10 Q I still believe that they are not related.

11 BY MR. SHAMBERG:

12 Q Notwithstanding JANA's conclusions in this report?

13 A That's correct.

14 Q And, in fact, if we look at the first page again  
15 under the heading "Gel Testing of the Pipe  
16 Samples," it indicates that one of the samples,  
17 this 071163, actually did not meet the minimum  
18 cross-linking requirement of ASTM F876. Right?

19 MR. KUHLMAN: Object to form.

20 A Yes, sir.

21 (Exhibit 26 was marked for identification.)

22 BY MR. SHAMBERG:

23 Q Okay. So I'm showing you another email that you  
24 wrote to a group of people at NIBCO in June of  
25 2007. Is that the correct date?

1 A Yes.

2 Q The subject is in-house barrier PEX chlorine  
3 resistance. And I want to ask you about the second  
4 paragraph in this e-mail. You say, "I mention this  
5 as our in-house orange product as a 'provisional'  
6 listing for chlorine resistance."

7 First, at the time you wrote this did you have  
8 an understanding of what a provisional listing for  
9 chlorine resistance was?

10 A I don't recall but -- yeah, I don't recall having  
11 knowledge of what the provisional listing was.

12 Q Then it goes on, "Testing has shown that this  
13 product" -- that is the orange PEX tubing -- "will  
14 not meet the requirements for chlorine resistance  
15 and we run the risk of NSF revoking our listing or  
16 losing it if/when we are audited by NSF."

17 How did you become aware of that testing?

18 A Well, once again, that's reviewing the test -- that  
19 report that we received from CPI.

20 Q So it's the -- what we were discussing earlier when  
21 you reviewed those test reports?

22 A Yes, sir.

23 Q You had said that was estimated that it was in  
24 around 2008. Would you now say it was more likely  
25 in the first half of 2007?

1 A Dates would suggest that, yes, sir.

2 Q And that was about two years, maybe a little bit  
3 less than two years before Aleesha Valentine from  
4 JANA raised the issue in the memo to NIBCO. Right?

5 A Yes, sir, in that time frame.

6 Q And would this also suggest to you that as of  
7 June 2007 NIBCO was still manufacturing and selling  
8 the orange pipe?

9 A Yes, sir.

10 Q When you say the testing has shown that this  
11 product will not meet the requirements for chlorine  
12 resistance, as of the date you wrote this email,  
13 did you give any consideration to discontinuing  
14 selling the orange pipe?

15 A I don't recall those discussions happening.

16 Q Is it something you thought about even if you  
17 didn't discuss it with anyone?

18 A No.

19 Q Were you concerned about the potential for that  
20 orange pipe to fail in the field when exposed to  
21 chlorine?

22 A At that time I can't recall what my feelings were.  
23 One of the questions, okay -- and this is addressed  
24 in the first part was, okay, the need for any  
25 chlorine resistance in -- for orange pipe, okay, in

1           that orange specifically for radiant heat  
2           applications. And radiant heat applications  
3           typically do not use chlorinated water with closed  
4           systems. So that's what prompted the very first  
5           question there. Do we really need chlorine  
6           resistance on this color and on this product. Once  
7           again, our marketing people determined that, yes,  
8           we did need that. Now whether that need was driven  
9           by actual performance requirements or to respond to  
10          a competitive situation, I can't answer. I don't  
11          know.

12        Q   Are certain colors of PEX tubing more appropriate  
13           for one particular application versus another?

14        A   I don't know that they are more appropriate. They  
15           are sort of slotted by the market into that  
16           situation. Okay, you see orange in radiant heating  
17           applications. You see red, white and blue  
18           typically in potable water applications. Terra  
19           cotta, which is one of our mainstays, is -- to use  
20           your phrasing -- an outlier. We are the only one  
21           that -- to my knowledge we are the only one that  
22           manufactures that color. People, I think, choose  
23           to use that wherever they wish.

24        Q   So on NIBCO's end in terms of the manufacturing of  
25           the product, there wouldn't be any difference

1           between the red, blue, white, orange, terra cotta  
2           piping when used with hot water within typical  
3           residential plumbing applications?

4       A     That's correct.

5       Q     So the fact that orange piping is typically used  
6           for radiant heat applications, that fact alone  
7           doesn't have any impact on how the pipe would  
8           perform as compared to other colors.   Correct?

9       A     That's correct.

10      Q     So you said radiant heating applications typically  
11           won't use chlorine but the orange pipe could be  
12           used in chlorinated environments as well as any of  
13           the other colors.   Correct?

14      A     Yes, sir.

15      Q     Do you remember having a conversation -- well, who  
16           was in charge of dealing with the -- at NIBCO with  
17           dealing with the third-party certification entities  
18           at this point in time in June of 2007?

19      A     That would have been still Mark Clark.

20      Q     Do you remember having any conversation with Mark  
21           saying, hey, you know, the orange tubing might not  
22           meet the requirements for chlorine resistance.   How  
23           are we gonna deal with this?

24      A     I don't recall.   I don't recall any conversations  
25           to that effect.

1 Q Do you recall anything that you did at any point in  
2 time to address the chlorine resistance --  
3 potential chlorine resistance issues with the  
4 orange PEX tubing?

5 MR. KUHLMAN: Object to form.

6 A No, sir, I don't.

7 BY MR. SHAMBERG:

8 Q Earlier we were discussing the extrusion process  
9 and you explained to me what that entails and how  
10 it works.

11 At what temperature was the 1006 PEX tubing  
12 extruded?

13 A It's in the region of, I believe, 440, 450 degrees  
14 Fahrenheit.

15 Q And was the 3308 tubing extruded at that same  
16 temperature?

17 A With some modifications, yes.

18 Q What were those modification?

19 A We had to change screw design using the Dow resin  
20 to reduce the sheer during extruding process.

21 Q You said screw design?

22 A Yes, sir.

23 Q What's that?

24 A You're -- depending -- in extrusion you got a  
25 heated barrel and a screw, which is basically as

1           you envision, a threaded component that goes down  
2           the center of that barrel. That screw, by design,  
3           okay, moves the material -- 'cause you're starting  
4           with pellets, you're melting it, moves that  
5           material down in the barrel. Okay, but it also --  
6           by design you can create sheer and help that barrel  
7           heat the material and melt it by the design. So by  
8           affecting that design, you control and affect the  
9           temperature that you're extruding the material.

10        Q    Okay. You said sheer, can you define what sheer  
11           is?

12        A    Sheer is the amount of work that is being put into  
13           the material.

14        Q    Okay.

15        A    Mechanical work.

16        Q    So you said that it was extruded at the same  
17           temperature but with these --

18        A    Mod --

19        Q    -- different modifications you described?

20        A    Yes, sir.

21        Q    How do those modifications affect the temperature,  
22           if at all?

23        A    They brought it back down to the 440, 450  
24           temperature range.

25        Q    Absent the modifications, how would the -- what

1 temperature would the 3308 have been extruded at?

2 A Using the same screws that we used for the Total  
3 material, melt temperature would have been up  
4 around 480, 490.

5 Q So about 40, 50 degrees higher than the 1006?

6 A Yes, sir.

7 Q Why -- absent the modifications, why would those  
8 temperatures be different?

9 A Because of the -- the way the polymer is made,  
10 okay. The Dow material is a much more viscous melt,  
11 okay, I mean, it doesn't flow as readily as the  
12 Total material. And, once again, as you have got  
13 the screw rotating in the barrel, okay, that  
14 actually puts work in the material, more sheer,  
15 you're creating, generating more.

16 Q Essentially more energy output equals more heat?

17 A Yes, sir.

18 Q We have kind of touched on some of the  
19 cross-linking. Can you just describe to me what  
20 cross-linking is?

21 A Cross-linking is -- if you look at polyethylene  
22 almost as a plate of spaghetti, okay,  
23 cross-linking -- or -- cross-linking, what it does  
24 is it actually forms chemical bonds, okay, between  
25 those strands of spaghetti, okay, sort of locking

1 the molecules in place so that they don't slip and  
2 move in relation to each other.

3 Q Okay. So it's essentially making pipe more stable?

4 A Yes.

5 Q Why is that necessary for PEX tubing? In other  
6 words, why do you have to cross-link PEX tubing?

7 A Because it builds -- or improves the creep  
8 resistance of the tubing. Polyethylene, as I said,  
9 without the cross-links those molecules will tend  
10 to slide and -- under conditions, okay, of pressure  
11 and -- those molecules will slide apart and  
12 eventually you'll get failure with long periods of  
13 time. At higher temperatures you accelerate it and  
14 so it occurs much faster. The actual cross-linking  
15 with those bridges between each of the molecules,  
16 okay, tends to lock that material in place so it  
17 can't move. You reduce the creep.

18 Q Okay. So it increases the resistance to creep  
19 rupture?

20 A Yes, sir.

21 Q Does the degree of cross-linking affect the  
22 chlorine resistance of the pipe?

23 A No, sir.

24 Q How does cross-linking affect oxidation, if at all?

25 A Not aware of any studies that says it does.

1 Q Can insufficient cross-linking in PEX tubing lead  
2 to premature stress corrosion cracking from  
3 chlorine exposure?

4 MR. KUHLMAN: Can you read that  
5 back?

6 A I was gonna ask the same thing.

7 (The question was read back.)

8 A You're gonna have to try that again. I'm not  
9 understanding what you're asking.

10 BY MR. SHAMBERG:

11 Q Are you familiar with the term "stress corrosion  
12 cracking"?

13 A Yes, sir.

14 Q What is stress corrosion cracking?

15 A That is a failure -- the tendency of metal  
16 components to fail under high levels of stress.

17 Q So can an insufficient level of cross-linking in a  
18 pipe lead to that premature stress corrosion  
19 cracking when exposed to chlorine?

20 MR. KUHLMAN: Object to form.

21 A No, sir, I don't believe so.

22 BY MR. SHAMBERG:

23 Q So there is really -- there is really, in your  
24 view, no connection between the level of  
25 cross-linking and, say, oxidative degradation in

1 the pipe?

2 A I have not seen any indication of that, no, sir.

3 Q What's the significance of gel content?

4 A Gel content is an indirect way of measuring the  
5 degree of cross-linking in the tubing.

6 Q Do you know how that measurment is performed?

7 A Yes, sir.

8 Q How is that?

9 A Basically you're taking pieces of tubing and  
10 because the act of cross-linking helps some of the  
11 chemical resistance, okay, in terms of when it's  
12 exposed to organic materials, okay, you're taking  
13 that tubing, taking xylene or some other very  
14 aggressive organic material and dissolving or  
15 trying to trying to dissolve the material. That  
16 material that is not cross-linked will dissolve, go  
17 into solution. That material that is cross-linked  
18 does not dissolve.

19 So at the end of your cook cycle you take the  
20 residue, you dry it, you weigh it and you get some  
21 relationship of some proportion of material that  
22 has not dissolved and they say that is the portion  
23 that is cross-linked. That's why all the  
24 cross-linking is in percent.

25 Q Does NIBCO perform these gel content tests on PEX

1 tubing that it manufactures?

2 A We do now.

3 Q Okay. Did a separate entity perform that testing

4 prior to NIBCO?

5 A Yes, sir.

6 Q What entity was that?

7 A JANA Labs.

8 Q And now NIBCO does it in-house?

9 A Yes, sir.

10 Q Does JANA do any gel content testing at this point

11 for NIBCO?

12 A Only on special occasions for research projects.

13 Q When did NIBCO begin doing that in-house?

14 A I believe about two years ago.

15 Q Do you know why NIBCO brought that testing

16 in-house?

17 A Cost. We can do it cheaper than paying JANA.

18 Q Are there industry standards for gel content in PEX

19 tubing?

20 A Yes, sir. They're written into the F876.

21 Q What are the standards in F876?

22 A For PEX-B and C minimum gel content is 65 percent,

23 the PEX-A minimum is 70 percent, the maximum is

24 89 percent for all.

25 Q Okay. Do you know what NIBCO's historical gel

1 content levels have been?

2 MR. KUHLMAN: Object to form.

3 A Actual data, no, I don't.

4 BY MR. SHAMBERG:

5 Q Do you know whether they are on the upper end of  
6 that range, the lower end of that range?

7 A We tend to target around 70 percent so probably at  
8 the lower end of the range.

9 Q Okay. So 70 would be kind of at the lower end?

10 A If we are targeting 65 is the absolute minimum,  
11 okay, the range is 65 to 89, so sort of place 70 at  
12 the lower end.

13 Q Would you say 70 is the ideal number for  
14 cross-linking?

15 A I'm not sure it's ideal, okay. Once again, we are  
16 trying to assure we are meeting the requirements of  
17 the specification. Okay, we have our targets set  
18 high enough so that any variation that is normal in  
19 any manufacturing process that we overcome that and  
20 assure we always are above that 65 percent.

21 Q To your knowledge has NIBCO ever considered  
22 reducing the gel content below 70 in order to save  
23 on costs?

24 A Yes, sir.

25 Q When did that occur?

1 A I don't recall specific dates but it was three,  
2 maybe four years ago.

3 Q Okay. And in that -- in that JANA report that we  
4 looked at from June 13, 2008, that was talking  
5 about the OIT, one of the samples -- at least one  
6 of the samples of the white PEX tubing was found  
7 not to have met that 65 percent threshold.  
8 Correct?

9 MR. KUHLMAN: Object to form.

10 A Yes, sir. It also noted that -- if I look at the  
11 manufacturing dates of the tubing, okay, I mean,  
12 the latest one, I believe, is 2003, so three years  
13 before NIBCO owned this, okay, I'm not sure what  
14 these products represent, okay. Obviously they  
15 were commercial 'cause it says it's field failures.  
16 But in terms of formulation or what the  
17 requirements for CPI, what type of gel targets they  
18 have, I can't comment. I have no -- no way of  
19 putting this information into content.

20 MR. SHAMBERG: Move to strike as  
21 nonresponsive.

22 BY MR. SHAMBERG:

23 Q You testified earlier that to your knowledge there  
24 were no changes made in the manufacturing process  
25 of the PEX tubing after NIBCO acquired CPI assets.

1 Correct?

2 A Yes, sir.

3 Q To follow-up on one point on the PERs that we were  
4 discussing earlier, are there any ways outside of  
5 the PER process that field failures are tracked  
6 within NIBCO?

7 A I don't have knowledge of that.

8 Q Okay. Have -- whenever you've become aware of  
9 fields failures has that always been through a PER?

10 A Yes, sir.

11 Q To your knowledge, if a customer calls to complain  
12 about a leak issue with PEX tubing but does not  
13 provide a sample of that tubing to NIBCO, will a  
14 PER be created?

15 A That I do not know.

16 Q I think I just have one more document, a couple  
17 more questions and then we are done.

18 (Exhibit 27 was marked for identification.)

19 BY MR. SHAMBERG:

20 Q Again, you know, please review the full document  
21 but my question will be just about the first  
22 sentence in the first email there.

23 A Okay.

24 Q Okay. So I just want to ask you about this email  
25 from January 5th, 2010, that you sent to Tom Coe

1 and Randy Doering in which you say, "As you are  
2 aware, we are working to remove reference to NSF  
3 from DURA-PEX markings and reference listing  
4 through IAPMO."

5 Why were you working to remove the reference  
6 to NSF?

7 A 'Cause we had shifted the listing of the PEX from  
8 NSF to IAPMO.

9 Q Okay. Why did the listing shift from NSF to IAPMO?

10 A Money.

11 Q Many reasons?

12 A Money. IAPMO was cheaper.

13 Q Didn't have anything to do with the chlorine  
14 resistance in the tubing?

15 A No, sir, not that I'm aware of. The IAPMO --  
16 because we are certified to the 876 has the same  
17 chlorine resistance requirements as the NSF.

18 Q Do you know whether the tubing would have had to  
19 have been tested in order to change that listing  
20 from NSF to IAPMO?

21 A No, sir, I do not.

22 Q No knowledge either way?

23 A No knowledge.

24 Q Who is Larry Smallwood?

25 A Larry Smallwood was the plant manager at CPI. When

1 we acquired he continued working at NIBCO until he  
2 retired maybe two years later.

3 Q Okay. Two years later, so maybe in 2008 ish he  
4 would have retired?

5 A Somewhere in that time frame, yes, sir.

6 Q Do you know what he is up to these days?

7 A Last I heard he was down in Florida. Maybe baling  
8 out his house by now but I don't know.

9 Q Tom Coe told me he was probably fishing. Do you  
10 think that's a possibility?

11 A I don't know. I don't know if he was a fisherman  
12 or not.

13 Q Grant Dow, do you know who Grant Dow is?

14 A Grant was one of our salespeople. I don't know --  
15 I don't know exact title. I don't know if he was a  
16 sales manager or retail manager or whatever but he  
17 worked in sales.

18 Q Did -- was the PEX tubing one of the products that  
19 he was responsible for selling?

20 A Yes, I believe so.

21 Q What about PEX fittings?

22 A Yes, I believe so.

23 Q And do you know what Grant does nowadays?

24 A No, sir, I do not.

25 Q Haven't been in touch with him since he left NIBCO?

1 A No, sir.

2 Q Do you know when he left NIBCO?

3 A No, I don't.

4 MR. SHAMBERG: Okay. That's all the  
5 questions I have right now.

6 MR. KUHLMAN: I've got a few  
7 follow-up questions. Do you want to take  
8 a couple-minute break? Let's take three  
9 minutes.

10 (A short break was held.)

11 CROSS-EXAMINATION

12 BY MR. KUHLMAN:

13 Q All righty. I'd like to direct your attention to  
14 Exhibit 65. You were asked a few questions about  
15 this document. If you could, please turn to the  
16 second page of the document.

17 A I don't have a 65.

18 Q Twenty-five. I can't read my own handwriting.

19 A Okay.

20 Q This is a JANA Laboratories report with a date of  
21 issue June 13, 2008; is that right?

22 A Yes, sir.

23 Q Okay. And there is listed table one on Page 2 of  
24 this document client sample IDs. Do you see what  
25 I'm looking at?

1 A Yes, sir.

2 Q And this document lists date codes; is that right?

3 A Yes, it does.

4 Q And this document reflects that the products that  
5 were manufac -- that are referenced here range in  
6 date codes from October of 1998 up to October of  
7 2003. Is that about right?

8 A Yes, that's correct.

9 Q Was NIBCO manufacturing --

10 MR. SHAMBERG: Object to form.

11 BY MR. KUHLMAN:

12 Q -- PEX tubing from 1998 to 2003 to the best of your  
13 knowledge?

14 A No, sir.

15 Q To the best of your knowledge were any of these  
16 samples manufactured by NIBCO?

17 A No, sir.

18 Q Do you know if these samples were manufactured  
19 using the same formulation that was ultimately  
20 acquired by NIBCO from CPI?

21 A No, sir.

22 Q And do you know if the manufacturer of these tubing  
23 samples used the same manufacturing processes that  
24 NIBCO started using when it acquired the assets of  
25 CPI?

1 A No, sir, I do not.

2 Q And when -- when NIBCO acquired the assets of CPI  
3 had NSF already certified that the red and orange  
4 tubing products met chlorine resistance  
5 requirements found in NSF876?

6 A Yes, sir, they did.

7 Q Okay. And the red and orange tubing products when  
8 those were being manufactured by NIBCO -- the 1006  
9 products, when those tubing products were being  
10 manufactured by NIBCO at all times they were  
11 certified by NSF as meeting those chlorine  
12 resistance standards; is that fair?

13 A Yes, sir.

14 Q And that is based on data that NSF had in its  
15 possession; is that fair?

16 A Yes, sir.

17 Q And that was based on NSF's interpretation of the  
18 test data that it had on those products?

19 A Yes, sir. They -- the -- all the -- I believe all  
20 the test reports, they were issued by NSF.

21 Q Did NIBCO ever lose its NSF certifications with  
22 respect to the red or orange 1006 PEX tubing?

23 A No, sir, we did not.

24 Q Now, you were asked a few questions about the  
25 reformulation project for PEX. Are you familiar

1 with that project?

2 A Yes, sir.

3 Q And as a result of that project, did NIBCO  
4 ultimately develop a 3308 PEX-C project?

5 A Yes, sir.

6 Q Was that project initiated to address a perceived  
7 quality problem with the 1006 product or to address  
8 a market need?

9 MR. SHAMBERG: Object to form.

10 A It was done to address market need, concerns that  
11 were a desire to meet competitor's claims out in  
12 the marketplace.

13 BY MR. KUHLMAN:

14 Q Okay. You were asked a few questions about what  
15 plumbers may or may not be aware of with respect to  
16 chlorine resistance standards. Do you remember  
17 talking about that generally?

18 A Yes, sir.

19 Q Okay. Do you personally have any knowledge if  
20 plumbers know what the 1006 rating or 3308 rating,  
21 do you personally know if any plumbers know or  
22 don't know what those mean?

23 A No, sir, I don't.

24 Q Same thing with respect to distributors. Do you  
25 have any personal knowledge about what they know

1 about what those ratings mean?

2 A No, sir.

3 Q You were asked a few questions about the Dare Lab.

4 And specifically I'd like to ask you about the --

5 the rationale for NIBCO transferring failure

6 analysis from the production facilities to the Dare

7 Lab.

8 Do you remember answering a few questions

9 about that?

10 A Yes, I do.

11 Q And when that occurred and the failure analysis for

12 the PEX product was moved from Lebanon, Ohio to

13 Elkhart, Indiana, to the Dare Lab, was that any

14 kind of commentary on the part of NIBCO with

15 respect to the quality of the analysis that they

16 were getting in Lebanon?

17 A No, sir. As I believe I stated, that was a drive

18 to improve our consistency and that move was not

19 just limited to NIBCO, okay, that was all 13 of our

20 manufacturing plants, everything from valves to

21 fittings to the tubing at Lebanon, okay, they all

22 came, okay, or started coming through Elkhart.

23 Q So that was NIBCO wide that wasn't simply PEX?

24 A That's correct.

25 Q Okay. You were asked a few questions about a

1 document, the exhibit number is 17. If you could  
2 please take a look at that.

3 A (Witness complies.)

4 Q And Exhibit 17 refers to something called a TEA  
5 coating?

6 A Yes, sir.

7 Q Were any fittings actually -- what became of this  
8 TEA coating technology? Was that used by NIBCO?

9 A No, it wasn't. NIBCO made substantial investments  
10 in putting in the equipment and basically the  
11 results showed what was repeated here, that unless  
12 you were very good at making the coating uniform,  
13 okay, you could not make it -- or achieve the  
14 objectives of putting that coating on the products.  
15 So the product was -- or the process was never  
16 commercialized and I don't believe any of the  
17 parts, okay, were ever sold. I mean, eventually  
18 the whole process or product line -- or process  
19 line was mothballed.

20 Q Okay. You were also asked a few questions about  
21 the existence of die lines. And I'd like to ask  
22 you a few questions about die lines. Is a die line  
23 necessarily -- strike that. Let me start over.

24 Just because a die line is on a piece of  
25 tubing, does that mean that the tubing is bad or

1 would fail to meet the standard?

2 MR. SHAMBERG: Object to form.

3 A No, sir.

4 BY MR. KUHLMAN:

5 Q What does a die line mean?

6 A Die lean means exactly, okay, I think what I tried  
7 to explain, okay, there is either a defect in the  
8 die, okay, it's been damaged in some way or there  
9 has been buildup or it's dirty, okay, such as char,  
10 what have you, that is causing the drag mark in the  
11 tubing as it flows through the, die, okay. And  
12 fact that it's present, okay, does not really  
13 detract or may not detract from the performance of  
14 the tubing.

15 Q So the existence of a die line doesn't necessarily  
16 mean that the tubing is going to have a problem  
17 down the road?

18 A That's correct.

19 Q You were also asked a few questions about gel  
20 content. And I'd like to ask you a few questions  
21 about what this really means. You mentioned that  
22 there is a range on gel content for PEX-C tubing  
23 that's permissible. I think it's between 65  
24 percent and 89 percent; is that right?

25 A Yes, sir.

1 Q And 65 percent would be the minimum and 89 percent  
2 would be the maximum?

3 A Yes, sir.

4 Q Does that mean that 65 percent is not as good as 89  
5 percent, is it like a range of what's good and  
6 what's best?

7 A No. It's not a measure of that. Okay, in fact, 89  
8 percent if you start approaching that, okay, you're  
9 tendency to start to cause brittleness in the  
10 tubing, okay, is increased. So manufacturers  
11 typically will try and identify a range, okay, that  
12 gives them the performance that they need, okay, to  
13 meet the 876 requirements, okay, and that they are  
14 able to achieve consistently and that's what we  
15 have done, okay, with our range, okay, kept it to  
16 the point where we are consistently meeting the  
17 requirements of 876 not only in gel but the  
18 performance requirements but not so high, okay,  
19 that you run the risk of causing other issues.

20 MR. KUHLMAN: That's all the  
21 questions I have.

22 REDIRECT EXAMINATION

23 BY MR. SHAMBERG:

24 Q Just a couple follow-ups. During your testimony  
25 today we took a couple of short breaks. During

1           those breaks did you discuss your testimony this  
2           morning with your attorneys?

3       A     Yes, sir.

4       Q     Does the fact that a product is third-party  
5           certified guarantee performance in the field?

6       A     No, sir.

7                               MR. SHAMBERG:   Okay, that's it for  
8                               me.

9                               MR. KUHLMAN:   Okay.   We will read  
10                              and sign.

11                             (Deposition concluded and Witness  
12                             excused at 1:12 p.m.)

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1 CERTIFICATE

2 I, Michelle D. Soffa, a competent and duly  
3 qualified court Reporter and a Notary Public within  
4 and for the County of Porter, State of Indiana, do  
5 hereby certify that there appeared before me the  
6 deponent, EARL HOWARD SEXTON, III, at 3401 Plaza  
7 Court, Elkhart, Indiana on the 11th day of October  
8 2016, who was thereupon first duly sworn by me to  
9 testify the truth and nothing but the truth in  
10 response to questions propounded to said deponent  
11 relating to the above-captioned cause now pending  
12 and undetermined in said court.

13 I further certify that I then and there  
14 reported in machine shorthand the testimony so  
15 given at said time and place, and that the  
16 testimony was then reduced to typewriting from my  
17 original shorthand notes, and the foregoing  
18 transcript is a true and accurate record of said  
19 testimony given by said deponent at said time and  
20 place.

21 I further certify that I am not related by  
22 blood or marriage to any of the parties to said  
23 suit, nor am I an employee of any of the parties or  
24 of their attorneys or agents, nor am I interested  
25 in any way, financially or otherwise, in the  
outcome of said litigation.

I further certify the reading and signing of  
the foregoing deposition by the witness was not  
waived.

Dated at Elkhart, Indiana, this 21  
day of October 2016.

Michelle D. Soffa

My commission expires:  
January 31, 2024  
County of Residence: Porter

1 UNITED STATES DISTRICT COURT  
2 DISTRICT OF NEW JERSEY

3 KIMBERLY COLE, ALAN COLE, )  
4 JAMES MONICA, LINDA BOYD, )  
5 MICHAEL MCMAHON, RAY SMINKEY, )  
6 JAMES MEDDERS, JUDY MEDDERS, )  
7 ROBERT PEPERNO, SARAH PEPERNO, )  
8 and KELLY MCCOY, on behalf of )  
9 themselves and all other )  
10 similarly situated, )  
11 )  
12 Plaintiffs, )  
13 vs. ) CIVIL ACTION NO.  
14 ) 13-7871(FLW)(TJB)  
15 NIBCO, INC., )  
16 )  
17 Defendant. )  
18 - - - - - )

19 EARL HOWARD SEXTON, III  
20 I hereby acknowledge that I have read the  
21 foregoing deposition transcript regarding the case  
22 of Cole v. NIBCO, taken on Tuesday, October 11,  
23 2016, and that the same is a true and correct  
24 transcription of the answers given by me to the  
25 questions propounded, except for the additions of  
or changes, if any, as noted on the attached errata  
sheet.

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